



Lawrence Livermore National Laboratory

Mailing Address: P.O. Box 5510, L 725, Livermore, CA 94551

EMPLOYMENT OPPORTUNITIES BULLETIN

November 16, 2001

Lawrence Livermore National Laboratory (LLNL) is a U.S. Department of Energy national laboratory operated by the University of California. Lawrence Livermore's mission is to apply science and technology in the national interest, with a focus on global security, global ecology, and bioscience. Laboratory employees are working with industrial and academic partners to increase national economic competitiveness and improve science education. The Laboratory's mission is dynamic and has changed over the years to meet new national needs.

The Laboratory's main facility is located in Livermore, California, approximately 50 miles south east of San Francisco. LLNL employs approximately 7000 employees and has an annual budget of over \$860 million.

JOB LISTINGS

Current vacancies are listed and updated daily in the LLNL Jobs homepage at www.llnl.gov/jobs. Current vacancies are also listed weekly in the printed Employment Opportunities Bulletin (EOB) which is available on-site in the Laboratory's Human Resources Department (B571) and the Career Center (B415), as well as offsite at the State of California Employment Development offices, and at many Bay Area libraries, colleges, and placement agencies. Positions may also be advertised in technical and professional publication, newspapers, magazines, and job web sites.

POSTING REQUIREMENT

Job vacancies are posted for a minimum of two weeks from the day the job is listed on the LLNL Jobs homepage. The posting date is indicated next to each job description. Since the hire decision may be made any time after the two-week period, only resumes received within this time frame can be assured of consideration. Positions remaining open after the initial two weeks will stay posted on the homepage until the recruitment process is completed. Our printed Employment Opportunities Bulletin lists open positions in full text for four weeks and then identifies them in the bulletin index. Updates to the printed EOB occur on a weekly basis.

EMPLOYEE TRANSFER AND PROMOTION

LLNL employees must apply using the Laboratory Employee Application Process (LEAP) form available on www.llnl.gov/jobs to be considered for specific job openings. A hard copy LEAP form is also available in the HR Lobby or Career Center. **Only career indefinite employees are eligible to apply for internal posted openings.**

HOW TO APPLY

To apply for specific positions at the Laboratory, please submit

a full resume on-line at www.llnl.gov/jobs. Only submissions indicating interest in a specific posting or postings will be processed. If you cannot submit your resume electronically, please mail to Recruiting & Employment L-725, P.O. Box 5510, Livermore, CA 94551. Resumes should be originals or a good reproduction typed on plain white 8-1/2 x 11 paper with no underlining, graphics or shading. In order to ensure proper routing, please indicate the job posting number(s) for each desired position. Each time you apply for a specific position you must enclose a resume. Your resume will remain in our database for a minimum of six months. However, new resumes will replace any previous saved resumes over thirty days old in the applicant system.

RESPONSE AFTER SUBMITTING RESUME

You will receive a response confirming receipt of your resume. After reviewing referred resumes, the hiring organization will determine which candidates to interview and will contact potential interviewees directly. We ask that you not contact the hiring department about the status of your resume. Only individuals who are interviewed will be notified of selection or non-selection for a position by the hiring organization. The hiring organization will select the applicant with the most suitable qualifications. Final approval for hire is contingent upon satisfactory completion of a pre-employment investigation.

EMPLOYMENT ELIGIBILITY

Except in unusual circumstances, U.S. citizenship is required for employment at LLNL in positions requiring Department of Energy security clearances. In compliance with the Immigration Reform and Control Act of 1986, LLNL only employs individuals who are legally able to work in the U.S. and who can provide valid supporting documentation.

ADDITIONAL INFORMATION

To inquire about LLNL employment, please call (925) 423-2977. Office hours are from 8:00 a.m. to 4:45 p.m. Monday through Friday. Accommodations for persons with disabilities can be arranged. For TDD please call (925) 422-4327.

EMPLOYEE BENEFITS OVERVIEW

Lawrence Livermore National Laboratory (LLNL) offers an excellent benefits package. The following is a summary of the major benefits. Benefits may vary according to type of appointment, time worked and duration of the assignment. <http://www.llnl.gov/llnl/02employment/workingat.htm>

VACATION

Ten hours are accrued each month. This amount increases after ten, fifteen and twenty years of service.

SICK TIME

Eight hours are accrued each month with no maximum accrual.

HOLIDAYS

Approximately twelve paid holidays are granted each year.

HEALTH PLANS

Employees have a choice of four HMO's (Health Net, Kaiser, PacifiCare and Western Health Advantage), a Fee-for-Service plan (High Option) and a Point-of-Service plan (UC Care). LLNL pays the full premium on some health plans.

DENTAL PLANS

Two comprehensive plans, PMI and Delta Dental, are available. LLNL pays the full premium.

VISION CARE PLAN

Vision care is provided by the Vision Service Plan. LLNL pays the full premium.

LIFE INSURANCE

LLNL provides free life insurance equivalent to one year's salary (\$50,000 maximum) and \$100,000 business travel insurance. In addition, you may purchase up to four times annual salary in extra life insurance. You may also purchase dependent life insurance.

LEGAL EXPENSE PLAN

This employee-paid plan is designed to help you with preventative, domestic, consumer and defensive legal services.

ACCIDENTAL DEATH AND DISMEMBERMENT PLAN

Up to \$500,000 in coverage, employee paid, is available.

DISABILITY INSURANCE

UC-paid temporary disability is provided. Employees may also supplement the UC-paid temporary disability plans with an employee-paid disability plan.

TAX SAVINGS PLAN

There are several plans that permit deductions of some benefit costs or expenses from gross pay before federal and state taxes.

RETIREMENT

In addition to Social Security, the employee contributes to the UC Defined Contribution Plan and/or Defined Benefit Plan.

ADDITIONAL SERVICES

CAREER OPPORTUNITIES AND TRAINING

LLNL encourages career development. Laboratory-sponsored education and training programs are available on-site, and eligible employees may receive release time and tuition reimbursement for classes at the many nearby universities. Several degree programs are offered on-site. <http://www.llnl.gov/llnl/02employment/workingat.htm>

HEALTH SERVICES

The Health Service Department has a professional staff of doctors and nurses providing emergency medical care, periodic health evaluations, health education, counseling and other related services. <http://www.llnl.gov/healthserv/welcome.html>

TRANSPORTATION

Call 422-RIDE for information on transportation alternatives including BART, AC Transit, and car/van pools. <http://www.transitinfo.org>
<http://www-r.llnl.gov/tsmp/about-tsmp.html>

CHILDREN'S CENTER

LLNL Employee Services Association offers employee paid, full and part-time care for children (newborn to 5 1/2 years of age) as well as an after-school program for kindergarten through 5th grade children. <http://llesla.llnl.gov/childcare/>

EXERCISE AND EMPLOYEE SERVICES

The LLNL Employee Services Association sponsors many clubs and activities, as well as an on-site exercise program and chair massage. The on-site Employee Store offers discounts on merchandise and reduced-cost tickets to area theme parks and special events. An Olympic-size pool, picnic areas, and par course are also located on-site. <http://llesla.llnl.gov>

HOUSING

The Housing Office provides rental housing information and information about the local and surrounding communities. <http://www.llnl.gov/llnl/02summer/Rental98.html>

CREDIT UNION

Three credit union branches are available with one located on-site. Automatic payroll deductions are an available option.

ACCOMMODATIONS FOR INDIVIDUALS WITH DISABILITIES

LLNL will provide, upon the applicant's request, reasonable accommodations to enable the applicant to participate in the selection process and/or perform the essential functions of the job.

Scientific / Engineering

DIVISION LEADER, ENVIRONMENTAL MICROBIOLOGY **DIVISION(200.0) - #BS-3204 - Biology and Biotechnology** **Research Program Directorate/Environmental Microbiology** **Division - 9860**

Date: 11/16/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Biology & Biotechnology Research Program (BBRP) has an opening for a Division Leader for the Environmental Microbiology Division. Reporting to the Associate Director, and as a member of the BBRP senior management team, the Environmental Microbiology Division Leader will have primary responsibility for creating and establishing robust research and development programs in the fields of microbial ecology, microbial communities (terrestrial or aquatic), ecology, environmental microbiology, environmental sciences, energy sciences, and/or chemical sciences, that are compatible with directorate, laboratory, and national priorities. The research will emphasize genome-scale analysis of microbial biochemistry, structure and function. The long-term goals will include understanding the individual and collective function of members of microbial communities, including their many unculturable members. This understanding will be applied to problems of importance to DOE's mission, including energy production and security, environmental damage and repair, carbon emission and global climate changes. The division will work closely with other DOE laboratories to establish integrated, synergistic research in support of Program-wide goals and priorities. The successful candidate will be responsible for the line management, scientific, technical, and administrative leadership of division personnel, as well as for DOE, WFO, LDRD, and other funding. The division leader will be accountable for the scientific excellence within the division and enhancing the technical and behavioral competencies of the division staff. The successful candidate will interact extensively and effectively with other BBRP Division Leaders and scientific staff, senior management throughout the laboratory (especially EEP) and other DOE facilities, and leaders in the biotechnical industry.

ESSENTIAL DUTIES:

- ~ Participate proactively in BBRP business and strategy planning. Create the scientific and business strategy for the Environmental Microbiology Division, ensuring alignment with directorate, laboratory, and funding agency goals.
- ~ Develop and lead a dynamic, sustainable program in environmental microbiology and microbial ecology that is consistent with the strategic plan and established goals of BBRP.
- ~ Ensure the excellence of all division scientific and technical activities. Foster new technology and development areas. Provide administrative and technical leadership and focus for division and fundamental research activities while encouraging and developing technical and leadership skills and teamwork among the scientific staff.
- ~ Promote and establish synergistic relationships across BBRP divisions, as well as other laboratory programs, to broaden the skills base and scope of scientific teams to meet both BBRP and LLNL goals.
- ~ Develop and maintain positive relationships with sponsors and potential sponsors consistent with the BBRP strategic plan. Prepare, coordinate, and oversee division grant and proposal applications to ensure proper alignment with division goals. Manage a variety of budgets.
- ~ Oversee division personnel-related activities, including affirmative action, recruitment, development, performance review, ranking and salary administration.
- ~ Ensure that individuals in the division observe applicable requirements pertaining to LLNL ES&H, security, and business practices.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. or equivalent in the biological sciences or related scientific disciplines. Special emphasis will be given to candidates with microbiology, microbial ecology, genomics, and/or industrial microbial experience.
- ~ Experience with microbiology, microbial communities (terrestrial or aquatic), ecology, environmental sciences, energy sciences, and/or chemical sciences, as evidenced by peer reviewed literature.
- ~ Strong technical background with demonstrated leadership in programmatic and scientific research and development. Significant technical and management experience. Demonstrated ability to lead scientific and technical staff across a broad range of disciplines and activities.
- ~ Demonstrated personnel administration experience including recruiting, hiring, career development, succession planning, performance reviews, conflict management, corrective action, ranking, and salary management.
- ~ Demonstrated success in sponsor development leading to funded programs. Effective management experience including project and program planning, and budget and personnel administration.
- ~ Demonstrated written and oral communication skills and the ability to interact effectively with people representing a wide variety of expertise and levels of responsibility.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Significantly distinguished record of achievement in related biological field.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Linda McMullen

DIVISION LEADER, QUANTITATIVE STRUCTURES & **DYNAMICS DIVISION(200.0) - #BS-3205 - Biology and** **Biotechnology Research Program Directorate/Quantitative** **Structures & Dynamics Division - 9861**

Date: 11/16/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Only Indefinite Career and Flexible Term status LLNL employees may apply for this position.

NATURE AND SCOPE OF POSITION:

The Biology & Biotechnology Research Program (BBRP) has an opening for a Division Leader for the Quantitative Structures & Dynamics Division. Reporting to the Associate Director, and as a member of the BBRP senior management team, the Quantitative Structures & Dynamics Division Leader will have primary responsibility for creating and establishing robust research and development programs in quantitative measurement of biochemical and biophysical structures and processes that are compatible with directorate, laboratory, and national priorities. This includes biochemical and cellular pathway dynamics, structural characterization, and protein expression and functions. The division will emphasize development of capabilities that mesh with and enhance other bioscience research, drawing on capabilities from across the laboratory. Particular emphasis will be placed on methods that can generate large, detailed data sets that can enable and test predictive, large-scale computational modeling. The successful candidate will be responsible for the line management, scientific, technical, and administrative leadership of division personnel, as well as for DOE, WFO, LDRD, and other funding. The division leader will be accountable for the scientific excellence within the division and enhancing the technical and behavioral competencies of the division staff. The successful candidate will interact extensively and effectively with other BBRP Division Leaders and scientific staff, technical staff and management throughout the laboratory (particularly Chemistry and PAT organizations) and other DOE facilities, and leaders in the biotechnical industry.

ESSENTIAL DUTIES:

- ~ Participate proactively in BBRP business and strategy planning. Create the scientific and business strategy for the Quantitative Structures & Dynamics Division, ensuring alignment with directorate, laboratory, and funding agency goals.
- ~ Develop and lead a dynamic, sustainable program in analytical biochemistry, biophysics and structural biology that is consistent with the strategic plan and established goals of BBRP.
- ~ Ensure the excellence of all division scientific and technical activities. Foster new technology and development areas. Provide administrative and technical leadership and focus for division and fundamental research activities while encouraging and developing technical and leadership skills and teamwork among the scientific staff.
- ~ Promote and establish synergistic relationships across BBRP divisions, as well as other laboratory programs, to broaden the skills base and scope of scientific teams to meet both BBRP and LLNL goals.
- ~ Develop and maintain positive relationships with sponsors and potential sponsors consistent with the BBRP strategic plan. Prepare, coordinate, and oversee division grant and proposal applications to ensure proper alignment with division goals. Manage a variety of budgets.
- ~ Oversee division personnel-related activities, including affirmative action, recruitment, development, performance review, ranking and salary administration.
- ~ Ensure that individuals in the division observe applicable requirements pertaining to LLNL ES&H, security, and business practices.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. or equivalent in the biological sciences, biochemistry, biophysics or related scientific discipline.
- ~ Experience with structural biology, protein expression, biophysics methodology, and/or molecular diagnostics, as evidenced by peer reviewed literature.
- ~ Strong technical background with demonstrated leadership in programmatic and scientific research and development. Significant technical and management experience. Demonstrated ability to lead scientific and technical staff across a broad range of disciplines and activities.
- ~ Demonstrated personnel administration experience including recruiting, hiring, career development, succession planning, performance reviews, conflict management, corrective action, ranking, and salary management.
- ~ Demonstrated success in sponsor development leading to funded programs. Effective management experience including project and program planning, and budget and personnel administration.
- ~ Demonstrated written and oral communication skills and the ability to interact effectively with people representing a wide variety of expertise and levels of responsibility.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Significantly distinguished record of achievement in related biological field.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Linda McMullen

DIVISION LEADER, GENOME REGULATION & FUNCTION
DIVISION(200.0) - #BS-3206 - Biology and Biotechnology
Research Program Directorate/Genome Regulation & Function
Division - 9862

Date: 11/16/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Only Indefinite Career and Flexible Term status LLNL employees may apply for this position.

NATURE AND SCOPE OF POSITION:

The Biology & Biotechnology Research Program (BBRP) has an opening for a Division Leader for the Genome Regulation & Function Division. Reporting to the Associate Director, and as a member of the BBRP senior management team, the Genome Regulation & Function Division Leader will have primary responsibility for creating and establishing robust research and development programs that move genome-scale research to the next stage beyond DNA sequencing and are compatible with directorate, laboratory, and national priorities. The scientific portfolio will include identifying and understanding gene regulatory elements and networks and their relationship to protein expression, generating data sets that can enable and test large-scale predictive computational models, developing clone resources and genomic information which supports world-wide biomedical research, and applying genetics and genomic methodologies to investigate disease-related gene functions. The successful candidate will be responsible for the line management, scientific, technical, and administrative leadership of division personnel, as well as for DOE, WFO, LDRD, and other funding. The division leader will be accountable for the scientific excellence within the division and enhancing the technical and behavioral competencies of the division staff. The successful candidate will interact extensively and effectively with all BBRP division leaders and scientific staff, senior management throughout the laboratory and other DOE facilities, and leaders in the biotechnical industry.

ESSENTIAL DUTIES:

- ~ Participate proactively in BBRP business and strategy planning. Create the scientific and business strategy for the Genome Regulation & Function Division, ensuring alignment with directorate, laboratory, and funding agency goals.
- ~ Develop and lead a dynamic, sustainable program in genome-scale biology research that is consistent with the strategic plan and established goals of BBRP, focusing on bringing new tools and approaches to understanding regulation and function.
- ~ Ensure the excellence of all division scientific and technical activities. Foster new technology and development areas. Provide administrative and technical leadership and focus for division and fundamental research activities while encouraging and developing technical and leadership skills and teamwork among the scientific staff.
- ~ Promote and establish synergistic relationships across BBRP divisions, as well as other laboratory programs, to broaden the skills base and scope of scientific teams to meet both BBRP and LLNL goals.
- ~ Develop and maintain positive relationships with sponsors and potential sponsors consistent with the BBRP strategic plan. Prepare, coordinate, and oversee division grant and proposal applications to ensure proper alignment with division goals. Manage a variety of budgets.
- ~ Oversee division personnel-related activities, including affirmative action, recruitment, development, performance review, ranking and salary administration.
- ~ Ensure that individuals in the division observe applicable requirements pertaining to LLNL ES&H, security, and business practices.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. or equivalent in the biological sciences or related scientific discipline.
- ~ Experience with genomics, genetic regulation, and/or comparative genomics, as evidenced by peer reviewed literature.
- ~ Strong technical background with demonstrated leadership in programmatic and scientific research and development. Significant technical and management experience. Demonstrated ability to lead scientific and technical staff across a broad range of disciplines and activities.
- ~ Demonstrated personnel administration experience including recruiting, hiring, career development, succession planning, performance reviews, conflict management, corrective action, ranking, and salary management.

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~ Demonstrated success in sponsor development leading to funded programs. Effective management experience including project and program planning, and budget and personnel administration.
~ Demonstrated written and oral communication skills and the ability to interact effectively with people representing a wide variety of expertise and levels of responsibility.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

~ Significantly distinguished record of achievement in related biological field.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Linda McMullen

DIVISION LEADER, HEALTH EFFECTS GENETICS DIVISION(200.0) - #BS-3207 - Biology and Biotechnology Research Program Directorate/Health Effects Genetics Division - 9861

Date: 11/16/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Only Indefinite Career and Flexible Term status LLNL employees may apply for this position.

NATURE AND SCOPE OF POSITION:

The Biology & Biotechnology Research Program (BBRP) has an opening for a Division Leader for the Health Effects Genetics Division. Reporting to the Associate Director, and as a member of the BBRP senior management team, the Health Effects Genetics Division Leader will have primary responsibility for creating and establishing robust research and development programs that are compatible with directorate, laboratory, and national priorities, to understand the genetic, biochemical, cellular and tissue effects of low-level radiation and chemical exposures and to link this understanding to clinical medicine and individual and collective risk assessment research. Division research will include biochemical and molecular toxicology, DNA repair, chemical and radiation damage to genes and chromosomes, radiation biology, chemical dosimetry, and cell damage. The successful candidate will be responsible for the line management, scientific, technical, and administrative leadership of division personnel, as well as for DOE, WFO, LDRD, and other funding. The division leader will be accountable for the scientific excellence within the division and enhancing the technical and behavioral competencies of the division staff. The successful candidate will interact extensively and effectively with other BBRP Division Leaders and scientific staff, senior management throughout the laboratory (especially BSSL and EED) and other DOE facilities, and leaders in the biotechnical industry.

ESSENTIAL DUTIES:

~ Participate proactively in BBRP business and strategy planning. Create the scientific and business strategy for the Health Effects Genetics Division, ensuring alignment with directorate, laboratory, and funding agency goals.
~ Develop and lead a dynamic, sustainable program in biochemical and molecular toxicology that is consistent with the strategic plan and established goals of BBRP.
~ Ensure the excellence of all division scientific and technical activities. Foster new technology and development areas. Provide administrative and technical leadership and focus for division and fundamental research activities while encouraging and developing technical and leadership skills and teamwork among the scientific staff.
~ Promote and establish synergistic relationships across BBRP divisions, as well as other laboratory programs, to broaden the skills base and scope of scientific teams to meet both BBRP and LLNL goals.
~ Develop and maintain positive relationships with sponsors and potential sponsors consistent with BBRP strategic plan. Prepare, coordinate, and oversee

division grant and proposal applications to ensure proper alignment with division goals. Manage a variety of budgets.

~ Oversee division personnel-related activities, including affirmative action, recruitment, development, performance review, ranking and salary administration.
~ Ensure that individuals in the division observe applicable requirements pertaining to LLNL ES&H, security, and business practices.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

~ Ph.D. or equivalent in the biological sciences or related scientific discipline.
~ Experience with DNA repair, chemical and radiation damage to genes and chromosomes, radiation biology and chemical dosimetry, and/or damage to cells, as evidenced by peer reviewed literature.
~ Strong technical background with demonstrated leadership in programmatic and scientific research and development. Significant technical and management experience. Demonstrated ability to lead scientific and technical staff across a broad range of disciplines and activities.
~ Demonstrated personnel administration experience including recruiting, hiring, career development, succession planning, performance reviews, conflict management, corrective action, ranking, and salary management.
~ Demonstrated success in sponsor development leading to funded programs. Effective management experience including project and program planning, and budget and personnel administration.
~ Demonstrated written and oral communication skills and the ability to interact effectively with people representing a wide variety of expertise and levels of responsibility.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

~ Significantly distinguished record of achievement in related biological field.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Linda McMullen

DIVISION LEADER, BIODEFENSE DIVISION(200.0) - #BS-3208 - Biology and Biotechnology Research Program Directorate/Biodefense Division - 9862

Date: 11/16/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Biology & Biotechnology Research Program (BBRP) has an opening for a Division Leader for the Biodefense Division. Reporting to the Associate Director, and as a member of the BBRP senior management team, the Biodefense Division Leader will have primary responsibility for creating and establishing robust research and development programs in the fields of biodefense, including pathogen detection, both biological signatures and detection technology, virulence mechanisms, host-pathogen interactions, and the relationship of this work to clinical medicine and consequence management, which are compatible with directorate, laboratory, and national priorities. The successful candidate will be responsible for the line management, scientific, technical, and administrative leadership of division personnel, as well as for DOE, WFO, and LDRD funding. The division leader will be accountable for the scientific excellence within the division and enhancing the technical and behavioral competencies of the division staff. The successful candidate will interact extensively and effectively with the

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biodefense communities, both civilian and military, with other BBRP Division Leaders and scientific staff, with senior management throughout the laboratory (particularly in NAI) and other DOE facilities and leaders in the biotechnical industry.

ESSENTIAL DUTIES:

- ~ Participate proactively in BBRP business and strategy planning. Create the scientific and business strategy for the Biodefense Division, ensuring alignment with directorate, laboratory, and funding agency goals.
- ~ Develop and lead a dynamic, sustainable program in counter bioterrorism that is consistent with the strategic plan and established goals of BBRP.
- ~ Ensure the excellence of all division scientific and technical activities. Foster new technology and development areas. Provide administrative and technical leadership and focus for division and fundamental research activities while encouraging and developing technical and leadership skills and teamwork among the scientific staff.
- ~ Promote and establish synergistic relationships across BBRP divisions, as well as other laboratory programs, to broaden the skills base and scope of scientific teams to meet both BBRP and LLNL goals.
- ~ Develop and maintain positive relationships with sponsors and potential sponsors consistent with the BBRP strategic plan. Prepare, coordinate, and oversee division grant and proposal applications to ensure proper alignment with division goals. Manage a variety of budgets.
- ~ Oversee division personnel-related activities, including affirmative action, recruitment, development, performance review, ranking and salary administration.
- ~ Ensure that individuals in the division observe applicable requirements pertaining to LLNL ES&H, security, and business practices.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. or equivalent in the biological sciences or related scientific discipline.
- ~ Experience with biochemistry, microbiology, low level detection, and/or mammalian cell biology, as evidenced in peer reviewed literature.
- ~ Significant technical and management experience. Demonstrated ability to lead scientific and technical staff across a broad range of disciplines and activities.
- ~ Strong technical background with demonstrated leadership in programmatic and scientific research and development. Significant technical and management experience. Demonstrated ability to lead scientific and technical staff across a broad range of disciplines and activities.
- ~ Demonstrated personnel administration experience including recruiting, hiring, career development, succession planning, performance reviews, conflict management, corrective action, ranking, and salary management.
- ~ Demonstrated success in sponsor development leading to funded programs. Effective management experience including project and program planning, and budget and personnel administration.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Significantly distinguished record of achievement in related biological field.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Linda McMullen

DIVISION LEADER, COMPUTATIONAL & SYSTEMS BIOLOGY
DIVISION(200.0) - #BS-3209 - Biology and Biotechnology
Research Program Directorate/Computational & Systems
Biology Division - 9861

Date: 11/16/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Only Indefinite Career and Flexible Term status LLNL employees may apply for this position.

NATURE AND SCOPE OF POSITION:

The Biology & Biotechnology Research Program (BBRP) has an opening for a Division Leader for the Computational & Systems Biology Division. Reporting to the Associate Director, and as a member of the BBRP senior management team, the Computational & Systems Biology Division Leader will have primary responsibility for creating and establishing a comprehensive program of modeling, simulation, and visualization of biological phenomena, including the molecular and biochemical level, molecular interactions and dynamics, protein structure, protein complexes, biochemical pathways, and higher-order organization and function. The division will work closely with the other elements of BBRP and the laboratory to apply the computational tools to current relevant scientific challenges which will test the models, provide insight and guidance to hypothesis and experiment design, and result in improvement to the models. A general knowledge of basic biology, biochemistry and molecular biology, which are compatible with directorate, laboratory, and national priorities is required. The successful candidate will be responsible for the line management, scientific, technical, and administrative leadership of division personnel, as well as for DOE, WFO, and LDRD, funding. The division leader will be accountable for the scientific excellence within the division and enhancing the technical and behavioral competencies of the division staff. The successful candidate will interact extensively and effectively with other BBRP Division Leaders and scientific staff, senior management throughout the laboratory (particularly in the Computation and Physics organizations) and other DOE facilities, and leaders in the biotechnical industry.

ESSENTIAL DUTIES:

- ~ Participate proactively in BBRP business and strategy planning. Create the scientific and business strategy for the Computational & Systems Biology Division, ensuring alignment with directorate, laboratory, and funding agency goals.
- ~ Develop and lead a dynamic, sustainable program in computational and systems biology that is consistent with the strategic plan and established goals of BBRP.
- ~ Ensure the excellence of all division scientific and technical activities. Foster new technology and development areas. Provide administrative and technical leadership and focus for division and fundamental research activities while encouraging and developing technical and leadership skills and teamwork among the scientific staff.
- ~ Promote and establish synergistic relationships across BBRP divisions, as well as other laboratory programs, to broaden the skills base and scope of scientific teams to meet both BBRP and LLNL goals.
- ~ Develop and maintain positive relationships with sponsors and potential sponsors consistent with the BBRP strategic plan. Prepare, coordinate, and oversee division grant and proposal applications to ensure proper alignment with division goals. Manage a variety of budgets.
- ~ Oversee division personnel-related activities, including affirmative action, recruitment, development, performance review, ranking and salary administration.
- ~ Ensure that individuals in the division observe applicable requirements pertaining to LLNL ES&H, security, and business practices.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. or equivalent in the chemistry, computations or biological sciences or related scientific discipline.
- ~ Experience with basic bio-computation methods including MD, docking, PSP, bio-informatics and a general knowledge of basic biology, biochemistry and molecular biology, as evidenced by peer reviewed literature.
- ~ Strong technical background with demonstrated leadership in programmatic and scientific research and development. Significant technical and management experience. Demonstrated ability to lead scientific and technical staff across a broad range of disciplines and activities.

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- ~ Demonstrated personnel administration experience including recruiting, hiring, career development, succession planning, performance reviews, conflict management, corrective action, ranking, and salary management.
- ~ Demonstrated success in sponsor development leading to funded programs. Effective management experience including project and program planning, and budget and personnel administration.
- ~ Demonstrated written and oral communication skills and the ability to interact effectively with people representing a wide variety of expertise and levels of responsibility.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Significantly distinguished record of achievement in related biological field.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Linda McMullen

CHIEF INFORMATION OFFICER(200.0) - #CO-3073 - Computation Directorate/Associate Director's Office - 9813

Date: 10/19/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Lawrence Livermore National Laboratory has an opening for a Chief Information Officer (CIO). The CIO will provide vision and leadership in the development of a comprehensive information architecture plan for the future and will serve as the principal information infrastructure advisor to senior management, driving new efforts as required. In addition, the CIO will work to derive optimal institutional solutions to the Laboratory's diverse computing and information needs in partnership with scientific and administrative computing units across the Laboratory. This position will be a part of the Computation Directorate's senior management team and will report directly to the Associate Director for Computation. The CIO will manage the total information technology (IT) budget and will work with various stakeholders to determine information technology priorities in concert with a CIO-developed enterprise plan. The CIO will oversee the Information Architecture (IA) project and the Computer Security Program (CSP).

ESSENTIAL DUTIES:

- ~ Develop information systems technology strategies that balance cost, technology, and service.
- ~ In conjunction with appropriate stakeholders, lead an effort to establish a long-range information infrastructure plan for the institution.
- ~ Define the roles, responsibilities and interfaces across the information infrastructure line organizations.
- ~ Establish a decision making process for strategic information infrastructure policies and activities.
- ~ Propose, establish and implement standards for common hardware, software, and processes that ensure interoperability, minimize cost and provide for the consolidation of services where appropriate (e.g., site licenses).
- ~ Establish, implement and manage information infrastructure policies and procedures and evaluate the effectiveness of such policies.
- ~ Create, approve and implement appropriate computer security policies.
- ~ Define and plan for the creation of new and/or improved technology to assist in the implementation of computer security.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS degree in Computer Science, Engineering or equivalent combination of education, training and experience.
- ~ Demonstrated leadership, personnel management and interpersonal skills with the ability to interact effectively with individuals representing a wide experience range.
- ~ Demonstrated ability to lead by influencing others.
- ~ Possess strong written and oral communications skills with demonstrated capabilities in delivering presentations and reports.
- ~ Demonstrated ability to bring the benefits of Information Technology (IT) to solve information management issues while managing cost and risk.
- ~ Demonstrated ability to identify and evaluate new technological developments and gauge their appropriateness for use at LLNL.
- ~ Evidence of creativity, innovative thinking and ability to make appropriate decisions in ambiguous situations.
- ~ Demonstrated advanced organizational, problem solving, decision making, analytical and leadership skills necessary to independently advise, recommend and approve appropriate actions and implement solutions.
- ~ Demonstrated ability to create and manage change.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ PhD in Computer Science, Engineering or related field or equivalent combination of education, training and experience.
- ~ Experience managing in a matrix environment.
- ~ Knowledge of DOE/NNSA, UC and Laboratory policies and procedures.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Barbara Tuck

DEPUTY ASSOCIATE DIRECTOR FOR COMPUTING APPLICATIONS AND RESEARCH DEPARTMENT(200.0) - #CO- 3138 - Computation Directorate/AD Office - 9813

Date: 10/25/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Only Indefinite Career status Lab employees may apply for this position.

NATURE AND SCOPE OF POSITION:

The Computation Directorate is seeking a dynamic individual to serve as Deputy Associate Director for Computing Applications and Research. This new Deputy Associate Director will be responsible for computing applications software development, computer science and mathematics research, and academic collaborations in these areas. This position reports to the Associate Director for Computation and is responsible for providing management oversight and technical leadership for the department. The department has approximately 450 employees, most of whom support Laboratory programs. The department has a research budget of nearly \$15M in ASCI, Office of Science, and LDRD funding. This position requires extensive interactions with LLNL programs, Laboratory senior managers, University of California, Department of Energy, other regulatory agencies, industry and academia.

ESSENTIAL DUTIES:

- ~ Provide management oversight and technical leadership for the department's technical, management, and administrative staff. This includes oversight of the Directorate's research portfolio and academic collaborations.
- ~ Initiate and facilitate Computation Directorate collaborations with other

Scientific / Engineering

directorates to accomplish programmatic and institutional goals in the computing sciences.

- ~ Represent the Directorate and Laboratory in interactions with DOE, UC, industry, and academia, especially in the areas of scientific computing and computer science.
- ~ Participate in formulation of directorate policy, initiatives, budget preparation, and strategic planning.
- ~ Develop and oversee departmental administrative and personnel policies, performance measures, salary management, financial operations, and recruiting activities.
- ~ Conduct operations and business management in compliance with UC/LLNL policy and procedures, contract 48 requirements, and applicable laws and regulations.
- ~ Ensure that work activities are conducted safely and securely.

MARGINAL DUTIES:

- ~ Represent the Directorate and Laboratory externally via participation in professional society activities, service on advisory boards, and attendance at campus and industry workshops.
- ~ Mentor and coach technical and support staff members.
- ~ Serve on Directorate and Laboratory committees.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS. in Computer Science, Applied Mathematics, or a related discipline or the equivalent level of demonstrated knowledge.
- ~ Experience managing and leading in a larger technical organization.
- ~ Comprehensive knowledge of strategic planning and organizational dynamics.
- ~ Comprehensive knowledge of managerial and financial practices and the ability to effectively balance complex technical and budgetary priorities to achieve desired results.
- ~ Advanced problem-solving, analytical, technical, organizational and management skills necessary to independently advise, recommend, and approve appropriate actions and implement solutions.
- ~ Demonstrated ability to make decisions based on aggregate information and the recommendations of others which significantly affect the ability of the organization and Laboratory to achieve its overall objectives and long-range goals.
- ~ Effective communication skills, both written and verbal, necessary to effectively explain, present, negotiate, advise, and influence all levels of management.
- ~ Demonstrated ability to delegate effectively and to lead, motivate, and build complex interdisciplinary teams to work toward programmatic and Institutional goals.
- ~ Ability to maintain a strong safety culture in the workplace as a priority in meeting institutional requirements.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ PhD in Computer Science, Applied Mathematics, or a related discipline.
- ~ Comprehensive understanding of LLNL programs and policies.
- ~ Familiarity with LLNL, Department of Energy, and University of California policies and procedures.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Barbara Tuck

ASSOCIATE DIRECTOR/BIOTECHNOLOGY AND BIOMEDICAL RESEARCH PROGRAM(200.0) - #DO-0627 - Director's Office - 9500

Date: 11/13/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Associate Director is responsible for developing and managing a diverse portfolio of highly interdisciplinary research and technology development programs in bioscience, biotechnology, and biomedicine. The Associate Director manages a budget of approximately \$50M and provides leadership for a staff of about 250 full-time employees in roughly 30 research groups in genomics and proteomics, molecular and structural biology, disease susceptibility and prevention, computational biology, and microbial biology. The program is highly integrated, multidisciplinary, and leverages research ties to the rest of the Laboratory, to the Joint Genome Institute, and to universities and industry. The Associate Director is also responsible for maintaining a strong pool of technical expertise in the bioscience and biomedical disciplines and for providing bioscience and biotechnology support to other Laboratory programs, particularly in the areas of environmental research and biodefense. The Associate Director reports to the Laboratory Director and serves as a member of the Laboratory senior management team and Chair of the Laboratory Council on Biosciences and Biotechnology. This Council has Laboratory-wide responsibilities to ensure the quality, content, and scope of all biology, biomedical, and biotechnology programs at LLNL. For more information about the Biology and Biotechnology Research Program, visit our web site at: <http://www-bio.llnl.gov/bbrp/bbrp.homepage.html>

ESSENTIAL DUTIES:

- ~ Implement strong and innovative research and development programs in bioscience, biotechnology, and bioinformatics.
- ~ Maintain and expand the science expertise essential to provide a bioscience, biotechnology, and bioengineering underpinning in the fields of national security, environment, and energy.
- ~ Work closely with other Laboratory technical programs, administrative and support organizations to accomplish programmatic goals.
- ~ Interact with senior government officials and program sponsors to initiate new program directions and strategic funding opportunities.
- ~ Facilitate industrial partnerships on relevant technologies.
- ~ Represent the Laboratory in outreach to the community.
- ~ Provide oversight for the Institutional Review Board (Human Subjects), Animal Care and Use, and Biosafety Committees.
- ~ Be responsible for administrative and operational performance, including management of the Directorate's workforce, diversity, budget, facilities, health and safety, and security.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. and/or M.D. or equivalent in the biological or medical sciences with a broad and deep technical background in biology, biotechnology, or biomedicine.
- ~ Experience in institutional-level program development and management of bioscience programs.
- ~ Nationally recognized research accomplishments in the biosciences as evidenced by publications and funding.
- ~ Demonstrated leadership and management skills and program and project planning experience.
- ~ Demonstrated oral and written communication skills required to effectively interact with senior management, sponsors, the scientific community, and the public.
- ~ Demonstrated effective interpersonal skills.
- ~ Knowledge of bioscience and biomedical research activities within the federal government, especially the Department of Energy and the National Institutes of Health.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

Scientific / Engineering

- ~ Understanding of the Laboratory and its bioscience-related programs.
- ~ Knowledge of the University of California/DOE contractual relationship.
- ~ Understanding of industrial organizations' bioscience and biotechnology activities.
- ~ Recognition by and participation in appropriate national and international research and advisory boards.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Linda McMullen

DEPUTY DEPARTMENT HEAD(200.0) - #EP-3086 - Environmental Protection Department - 9689

Date: 11/9/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Environmental Protection Department has an opening for a Deputy Department Head to assist the Department Head with the overall management of the department, including both technical and administrative direction. The Environmental Protection Department assists the Laboratory's programs and the institution in meeting their environmental responsibilities, and conducts environmental restoration and hazardous waste management activities. The Deputy Department Head will act for the Department Head in her absence, or when so directed, in interactions with Laboratory programs, DOE, and State and Federal environmental regulatory agencies. The Deputy Department Head will generally be responsible for overseeing the daily operations of the Department. While candidates must possess technical skills, program and leadership experience, and an understanding of Laboratory operations, an essential requirement is a transparent, action-oriented management style.

ESSENTIAL DUTIES:

- ~ Lead and manage the daily operations of the department.
- ~ Represent and provide backup support for the Department Head in meetings and in negotiations with other Laboratory organizations/programs and regulatory agencies.
- ~ Assure that the business practices within the department promote EPD's/SSEP's strategic goals and are consistent with fiscal constraints.
- ~ Provide technical and administrative leadership and oversight, which includes hiring and recruiting, and performance management.
- ~ Assure the technical quality and maintain budget and resource projections department-wide.
- ~ Perform long-range planning and establish and ensure EPD mission, goals and work activities are met.

MARGINAL DUTIES:

- ~ Take on various institutional responsibilities as requested.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS in science or engineering or equivalent experience.
- ~ Demonstrated excellent written and verbal communication and strong interpersonal skills to effectively communicate with a wide variety of disciplines and levels of management.
- ~ Demonstrated high quality technical work and effective leadership.
- ~ Demonstrated experience in managing multi-disciplinary activities or projects.
- ~ Experience in progressively responsible supervisory and management positions, successfully handling personnel issues, and employee development
- ~ Demonstrated budget management experience and development and

management of diverse short and long-term projects and institutional goals.

- ~ Experience in the environmental field and in interactions with regulatory agencies and the DOE.

~ Demonstrated advanced organizational, problem solving, decision making, analytical and leadership skills necessary to independently advise, recommend and approve appropriate actions and implement solutions.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. in science or engineering or equivalent experience.
- ~ Experience in Quality Assurance and training program development.
- ~ Experience in program development/management and in getting new initiatives funded through DOE and WFO sponsors.
- ~ Knowledge of LLNL and DOE policies and procedures.
- ~ Experience in successfully interfacing with DOE and UC.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Stacy Page

PROGRAM MANAGER FOR HOMELAND SECURITY ANALYSIS(200.0) - #NA-3049 - Nonproliferation, Arms Control & International Security(NAI) Directorate/R Division - 9842

Date: 10/24/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Counterterrorism and Incident Response Division (R Division) within NAI has an opening for the Program Manager for Homeland Security Analysis. R Division has the primary responsibility within LLNL for developing and demonstrating new capabilities to counter terrorism and for maintaining the appropriate operational capabilities to respond to WMD threats. The major components of R Division include the Chem/Bio national Security Program, the Forensic Science Program, the Nuclear Assessment Program, and the Nuclear Incident Response Program. This position will lead efforts to apply LLNL capabilities to homeland security, including strategies for the protection of cities and infrastructure and analysis of problems and potential solutions to broader homeland security issues. This position reports directly to the R Division Leader.

ESSENTIAL DUTIES:

- ~ Provide oversight of personnel, budget, and technical and general managerial issues, including monitoring of specific activities and the setting of review standards.
- ~ Acquire staff, facilities, equipment, and other needed resources; direct the research, and establish and communicate the recommendations and goals of Division programs.
- ~ Assign and monitor specific tasks within the Program; assign resources and program responsibilities.
- ~ Set standards and provide first-level review of the Program's product, including technical quality, relevance, timeliness, and method of presentation.
- ~ Communicate the status and nature of Homeland Security efforts to sponsors, federal agencies, oversight committees, and other organizations.
- ~ Plan and develop strategies for program growth, including new project areas and proposals.
- ~ Promote a safe and environmentally sound workplace, incorporating Integrated Safety Management (ISM) practices.
- ~ Promote sound security practices in compliance with UC and DOE requirements.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D., or equivalent level of demonstrated knowledge, in Physics, Chemistry or Engineering.
- ~ Demonstrated extensive programmatic, technical and management experience in science and engineering.
- ~ Demonstrated expertise in countering biological and/or nuclear terrorism, including the technical issues related to protecting and defending the US from weapons of mass destruction.
- ~ Demonstrated leadership skills and personnel management experience.
- ~ Demonstrated effective oral and communication skills.
- ~ Experience working with federal and private agencies.
- ~ Demonstrated program/sponsor development success.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

None

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Alison Bradley-Carver

SCIENTIST/ENGINEER(200.0) - #NF-3015 - National Ignition Facility Programs Directorate/National Ignition Facility Project - 9874

Date: 10/23/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Only Indefinite Career status Lab employees may apply for this position.

NATURE AND SCOPE OF POSITION:

The NIF Programs Directorate has an opening for a Computer Scientist or Computational Physicist to support the System Performance Modeling group within the NIF Project. The successful candidate will participate in the development of a computational system that will automate the setup of all 192 beams of the NIF laser. A major ongoing effort, called the Laser Performance Operations Model (LPOM) is being initiated to develop, integrate and implement a system of computational modules, design a parallel processing cluster, develop database interfaces, and develop Graphical User Interfaces (GUI) to support operation of the system. The successful candidate will assume a lead role in creating systems requirements, determining the software design, selecting the hardware, assessing external libraries and tools and adapting them as appropriate, and developing interfaces and web tools. He/she will collaborate with a team of laser physicists who will be responsible for developing simulation algorithms and modules, as well as work closely with the NIF Integrated Computer Control Systems (ICCS) in developing database interfaces between the LPOM and ICCS systems. This position will report to the Systems Engineering Associate Project Manager.

ESSENTIAL DUTIES:

- ~ Select commercially available hardware using a parallel processing architecture.
- ~ Assure that code development and maintenance conform to best current programming practices.
- ~ Develop interface requirements for the interaction of the LPOM system and ICCS.
- ~ Assume responsibility for software coding, integration and implementation of computational prototypes into a production environment.
- ~ Develop and maintain database structures for inputs describing gain and loss

distributions and optical aberrations, and model outputs of laser energies and spatial profiles.

- ~ Develop a set of Graphical User Interfaces that will display information to NIF operations and other users in support of NIF experiments. Displays will include multi-level ("tree-down") representations of laser system performance, computational system monitoring, and interfaces to a suite of data analysis tools.
- ~ Collaborate with team members in developing and maintaining both user documentation and code-structure documentation.

MARGINAL DUTIES:

- ~ Develop server system enabling remote problem setup and execution.
- ~ Locate, assess, implement, and adapt tools for parallel processing, code visualization, and steering.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS/BA Degree in computer science, mathematics, physics, or electrical engineering, or the equivalent level of demonstrated knowledge.
- ~ Demonstrated expertise in selecting appropriate hardware for a computer system.
- ~ Demonstrated expertise in the development of object-oriented scientific software in C++.
- ~ Experience with and interest in developing GUI's for data display, system information and interfaces to data analysis tools.
- ~ Strong background in hardware and software design.
- ~ Familiarity with real-time operating systems, including message passing procedures.
- ~ Ability to interact with a team of physicists and to assist in educating them in proper modern programming practices.
- ~ Strong written and verbal communication skills.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Familiarity with parallel processing procedures.
- ~ Familiarity with physics and engineering of laser design.
- ~ Experience with closed-loop control algorithms.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Alison Bradley-Carver

POSTDOCTORAL RESEARCHER(220.0) - #BS-3091 - Biology and Biotechnology Research Program Directorate/Genomics Division - 9862

Date: 11/5/01 **Salary:** Open

NOTE:

This is a three-year (3) term appointment.

NATURE AND SCOPE OF POSITION:

An opening exists in the Biology & Biotechnology Research Program for a bioscientist to develop and implement comparative genomics approaches for the study of gene regulation in mammals. The focus of this work will be the development of high-throughput methods for functional annotation of the human genomic sequence, including identification of candidate regulatory elements and testing them for function, and correlation of regulatory sequence structure with associated patterns of cell-type specific expression. The successful candidate will become an integral member of a larger group with expertise in mouse genetics, comparative genomics, and molecular pathology, and will collaborate with LLNL and outside teams focused on protein biochemistry, bioinformatics, and regulatory biology. Candidate will report to the Principal Investigator and Group Leader for Mouse Genomics.

ESSENTIAL DUTIES:

- ~ Collaborate with other scientists to identify genes and candidate regulatory elements using comparative sequencing data and bioinformatics tools.
- ~ Collaborate in experiments to verify predicted genes and assess their cell-type specific patterns of expression.
- ~ Design and generate plasmid constructs containing candidate elements for functional testing.
- ~ Contribute intellectual leadership for team research to develop high-throughput methods for testing the functions of regulatory elements in cultured cells and transgenic mice.
- ~ Prepare manuscripts for publication and oral presentations to relate these efforts to the biomedical research community.
- ~ Assist PI in preparation of grant proposals.
- ~ Collaborate with team members and other researchers to develop and implement bioinformatics tools for data tracking and for correlating regulatory element sequence with conserved functions.
- ~ Collaborate with protein biochemists on studies aimed at identification of proteins that bind to and interact with confirmed regulatory DNA sequences.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Recent Ph.D. in molecular biology, genetics or equivalent field.
- ~ Expertise with concepts and methods of molecular biology, molecular genetics and genomics.
- ~ Hands-on experience with genomic databases and Web-based sequence analysis tools.
- ~ Effective oral and written communications skills to lead team, prepare manuscripts and present research results.
- ~ Experience developing independent research projects as demonstrated through publication of peer-reviewed manuscripts.
- ~ Excellent interpersonal skills with experience performing collaborative research in a team environment, preferably as a lead.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Background in regulatory biology and/or genomics.
- ~ Advanced bioinformatics skills.

SECURITY: Anticipated clearance level: None

EMPLOYMENT REP: Linda McMullen

POST DOCTORAL RESEARCH STAFF MEMBER(220.0) - #CH-2892 - Chemistry and Materials Science Directorate - 9812

Date: 10/26/01 **Salary:** Open

NOTE:

Reposted position. Originally posted as CH-9841. Previous candidates need not reapply. This requisition has multiple openings. These are one or two year term appointments with the possibility of extension to a maximum of three years.

NATURE AND SCOPE OF POSITION:

The Chemistry & Materials Science Directorate has research opportunities across all of its divisions (Analytical and Nuclear Chemistry, Materials Science and Technology, and Chemistry and Chemical Engineering) for highly qualified individuals with either experimental or theoretical backgrounds.

ESSENTIAL DUTIES:

- ~ Contribute to the conception, design, and execution of research to address defined problems.
- ~ Analyze, report, and present results.
- ~ Coordinate activities of supporting technical personnel.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Recent Ph.D. in Chemistry, Physics, Chemical Engineering, Materials Science, or related field.
- ~ Publication record in refereed journals.
- ~ Strong interpersonal and communication skills.
- ~ Ability to work both independently and in a team environment.
- ~ Scientific approach to problem solving.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Wide range of research interests.

SECURITY: Anticipated clearance level: L

EMPLOYMENT REP: Teri Kobayashi

POST DOCTORAL RESEARCH STAFF MEMBER(220.0) - #CH-3124 - Chemistry and Materials Science Directorate - 9812

Date: 10/26/01 **Salary:** Open

NOTE:

Reposted position. Originally posted as CH-9842. Previous candidates need not reapply. This requisition has multiple openings. These are one or two year term appointments with the possibility of extension to a maximum of three years.

NATURE AND SCOPE OF POSITION:

The Chemistry and Materials Science Directorate is seeking outstanding candidates for Directorate-Funded post-doctoral positions to work in a challenging research environment. These positions are in support of fundamental and applied research working with the top specialists in these and related fields: Analytical Chemistry; Materials Characterization; Polymers and Soft Matter Synthesis; Nuclear and Actinide Chemistry; Optical Materials Science; Electrochemistry; Materials Chemistry and Physics; Computational Chemistry and Materials Science; and Metallurgy.

ESSENTIAL DUTIES:

- ~ Contribute to the conception, design, and execution of research to address defined problems.
- ~ Publish results in peer-reviewed scientific journals.
- ~ Analyze, report, and present scientific results at seminars, technical meetings, national and international conferences.
- ~ Coordinate activities of supporting technical personnel.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Recent Ph.D. in a relevant scientific field, as listed above.
- ~ Experience in writing reports, publications and proposals.
- ~ Publication record in refereed journals.
- ~ Excellent written and verbal communication skills.
- ~ Ability to work independently as well as in a team environment.

Scientific / Engineering

~ Scientific approach to problem solving.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

~ Wide range of research interests.

SECURITY: Anticipated clearance level: L

EMPLOYMENT REP: Teri Kobayashi

PHYSICIST/ATMOSPHERIC SCIENTIST(220.0) - #EZ-3110 - Energy and Environment Directorate/Atmospheric Science Division - 9744

Date: 11/16/01 **Salary:** Open

NOTE:

This is a three-year term appointment.

NATURE AND SCOPE OF POSITION:

The Atmospheric Science Division (ASD) has openings for scientists experienced in atmospheric dispersion modeling and boundary-layer meteorology, numerical modeling of physical processes, high performance computing, and/or field experiments. ASD scientists pursue research focused on the development of a state-of-the-science atmospheric dispersion modeling system for predicting the consequences of hazardous material releases over multiple scales. The division develops models for meteorological data assimilation, numerical weather prediction, and dispersion in complex meteorological, land-surface, and urban environments. Areas of current research include methods for estimating meteorological and dispersion model predictability, approaches for optimizing source-term parameters based on sensor measurements, techniques for coupling models across multiple scales, and the development of high performance computing parallelized algorithms. In addition, ASD scientists are engaged in designing, conducting, and analyzing atmospheric field experiments to test model performance. Research personnel also collaborate closely with a team of atmospheric and computer scientists to provide scientific support for a national operational atmospheric release emergency response system. Directly reports to the Meteorology and Regional Dispersion Group Leader.

ESSENTIAL DUTIES:

- ~ Pursue research and development of data assimilation, numerical weather prediction, and/or atmospheric dispersion models.
- ~ Conduct model application studies.
- ~ Publish research results in technical reports and peer-reviewed journals and present technical results at scientific conferences.
- ~ Travel as required to coordinate research with collaborators.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Recent Ph.D. in atmospheric science/physics or closely related field.
- ~ Expertise in atmospheric dispersion and/or boundary-layer meteorology, including numerical weather prediction, meteorological data assimilation, and physical process parameterizations.
- ~ Demonstrated experience in model development, evaluation, and/or applications.
- ~ Demonstrated research experience.
- ~ Computational expertise in numerical methods, modern programming languages, and visualization techniques.
- ~ Experience collaborating effectively with a team of scientists of diverse backgrounds.
- ~ Verbal and written communication skills as evidenced by published results and

presentations.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Expertise with statistical and optimization techniques.
- ~ Expertise in designing and conducting field experiments and data analysis.
- ~ Computational experience in high performance computing.

SECURITY: Anticipated clearance level: P

EMPLOYMENT REP: Linda McMullen

POSTDOCTORAL RESEARCH STAFF MEMBER(220.0) - #EZ- 3177 - Energy and Environment Directorate/Atmospheric Science Division - 9744

Date: 11/16/01 **Salary:** Open

NOTE:

This is a three-year term appointment.

NATURE AND SCOPE OF POSITION:

The Atmospheric Science Division (ASD) has an immediate opening in the Urban Dispersion Computational Fluid Dynamics group for a researcher experienced in developing and applying numerical models on parallel platforms. The goal of this position is to support, enhance, and apply a massively-parallel version of an existing model to simulate flow and dispersion around structures. This model has been developed to support the chem-bio project's goal of assessing the transport of contaminants around buildings. Close collaboration with other research and computer scientists, internal and external to the project, to conduct independent and team research in atmospheric science is also required. The scientist will directly report to the Urban Dispersion Computational Fluid Dynamics Group Leader.

ESSENTIAL DUTIES:

- ~ Develop and implement parallel algorithms into an existing numerical model.
- ~ Collaborate with project and other scientists in the development, testing, and validation of the developed numerical models for building-scale dispersion scenarios.
- ~ Develop and implement post-processing graphical tools for analyzing and displaying numerical results.
- ~ Write technical publications and deliver oral presentation of research work to other scientific collaborators internal and external to LLNL.
- ~ Travel as required to coordinate research with collaborators.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Recent Ph.D. in atmospheric science, applied mathematics or closely related field.
- ~ Experience with the use and development of computer models.
- ~ A working knowledge of computational fluid dynamics and dispersion modeling, and computer programming skills relevant to developing code on high performance computer systems.
- ~ Publication record in atmospheric science.
- ~ Experience with MATLAB, FORTRAN 77/90 and programming on a massively-parallel platform.
- ~ Effective written and verbal communication skills to produce programmatic reports and present research results to a large audience.
- ~ Experience working effectively both in a diverse team environment and as an independent researcher.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

~ Experience in use of LLNL's ASCI computer system or equivalent is highly desirable.

SECURITY: Anticipated clearance level: P

EMPLOYMENT REP: Linda McMullen

POST DOCTORAL RESEARCH STAFF MEMBER(220.0) - #NA-2942 - Nonproliferation, Arms Control, and International Security Directorate/Q Division - 9839

Date: 10/25/01 **Salary:** Open

NOTE:

This requisition has multiple openings. This is a one year term appointment with the possibility of extension to a maximum of three years.

NATURE AND SCOPE OF POSITION:

The Proliferation Detection and Defense Systems Program (Q Division) in the Nonproliferation, Arms Control, and International Security (NAI) Directorate has a number of postdoctoral positions open for a physicist, engineer or chemical engineer to participate in a variety of technical research programs in support of national security. These positions involve becoming a member of a team conducting analyses, calculations, or experiments in one of several projects. Current research areas include photonics, communications and sensor technologies, spectroscopy, nuclear physics, astrophysical sciences and mathematics that support the program interests of: detection and interdiction of proliferators of weapons of mass destruction; high-resolution combat simulations, systems analyses of various Department of Defense (DoD) technologies; missile lethality and vulnerability studies; weapon effects simulations and experiments. Successful candidates will interact with members of other groups and divisions at LLNL. This position will report to the Associate Division Leader.

ESSENTIAL DUTIES:

- ~ Contribute to a vigorous program of technical research as a member of a team composed of physicists, engineers, chemists, mathematicians, and other professionals.
- ~ Identify additional research and analysis opportunities in related programmatic areas and develop proposals for funding these activities.
- ~ Coordinate activities and present results at various locations.
- ~ Generate periodic written reports.
- ~ Prepare and present briefings of technical results.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Recent PhD in physical sciences or engineering.
- ~ Demonstrated creativity to develop, analyze, perform calculations, and implement experimental strategies, with exceptional ability and knowledge within defined areas of specialization: (photonics, communications and sensor technologies, spectroscopy, nuclear physics, astrophysical sciences and mathematics).
- ~ Demonstrated ability to work as a member of a team and also to work independently, with minimal supervision.
- ~ Demonstrated excellent written and verbal communication skills.
- ~ Demonstrated strong technical, organizational and interpersonal skills.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

None

SECURITY: Anticipated clearance level: Q and SCI

EMPLOYMENT REP: Alison Bradley-Carver

POSTDOCTORAL RESEARCHER(220.0) - #PT-3029 - Physics and Advanced Technologies Directorate/I Division - 9852

Date: 10/25/01 **Salary:** Open

NOTE:

This is a one- to two-year term appointment with the possibility of extension to a maximum of three years.

NATURE AND SCOPE OF POSITION:

A limited number of research opportunities exist for one- to two-year postdoctoral appointments. Highly qualified experimentalists and theorists are needed in several of the following areas: applied physics, materials science, electrical engineering, optics, high-pressure physics, plasma physics, particle physics, atomic physics, physics of heterogeneous magnetic systems, x-ray spectroscopy, and x-ray instrumentation. Will report to the Group Leader.

ESSENTIAL DUTIES:

- ~ Participate in the design and performance of experiments and analyses in support of projects.
- ~ Develop models and computer algorithms to understand the behavior of new materials, new physical processes and matter at extreme conditions, especially low temperatures.
- ~ Publish results in peer-reviewed scientific or technical journals and present results at external conferences.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Recent PhD and expertise in one or more of the following areas: applied physics, materials science, electrical engineering, optics, high-pressure physics, plasma physics, particle physics, atomic physics, physics of heterogeneous magnetic systems, x-ray spectroscopy, and x-ray instrumentation.
- ~ Significant accomplishments in experimental science.
- ~ Demonstrated ability to find innovative solutions to scientific and technical problems.
- ~ Experience working independently and in a team environment to achieve program goals in a timely fashion.
- ~ Demonstrated oral and written communication skills.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

None

SECURITY: Anticipated clearance level: None, L or Q depending upon location

EMPLOYMENT REP: Carol Twiss

POSTDOCTORAL RESEARCHER(220.0) - #PT-3030 - Physics and Advanced Technologies Directorate/V Division - 9849

Date: 10/25/01 **Salary:** Open

NOTE:

Scientific / Engineering

This is a one- to two-year term appointment with the possibility of extension to a maximum of three years

NATURE AND SCOPE OF POSITION:

A limited number of research opportunities exist for one- to two-year postdoctoral appointments. Highly qualified experimentalists and theorists are needed in several of the following areas: applied physics, high-pressure physics, plasma physics, astrophysics, particle physics, atomic physics, x-ray spectroscopy, x-ray instrumentation, radiative properties of hot dense plasmas, and high energy density physics. Will report to the Group Leader.

ESSENTIAL DUTIES:

- ~ Participate in the design and performance of experiments and analyses in support of projects.
- ~ Develop models and computer algorithms to understand the behavior of new materials, new physical processes and matter at extreme conditions.
- ~ Publish results in peer-reviewed scientific or technical journals and present results at external conferences.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Recent PhD and expertise in one or more of the following areas: applied physics, high-pressure physics, plasma physics, astrophysics, particle physics, atomic physics, x-ray spectroscopy, x-ray instrumentation, radiative properties of hot dense plasmas, high energy density physics or laboratory astrophysics.
- ~ Significant accomplishments in experimental science.
- ~ Demonstrated ability to find innovative solutions to scientific and technical problems.
- ~ Experience working independently and in a team environment to achieve program goals in a timely fashion.
- ~ Demonstrated oral and written communication skills.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

None

SECURITY: Anticipated clearance level: None, L or Q depending upon locat

EMPLOYMENT REP: Carol Twiss

BIOMEDICAL SCIENTIST(225.0) - #BS-3058 - Biology and Biotechnology Research Program Directorate/Joint Genome Institute - 9863

Date: 10/25/01 **Salary:** Open

NOTE:

This is a Flexible Term (at will) appointment, not to exceed six years. This appointment is at the DOE Joint Genome Institute located in Walnut Creek, California.

NATURE AND SCOPE OF POSITION:

The Biology and Biotechnology Research Program has an opening in the Functional Genomics group within the Joint Genome Institute. This position functions as a molecular biologist for cloning expression constructs for protein studies in the Proteomics group. Will be responsible for performing a variety of experiments, analyzing and reporting results, detailed recordkeeping, organizing materials and overseeing the work of others. This position reports to the Proteomics Manager.

ESSENTIAL DUTIES:

- ~ Design and perform experiments in the following areas: isolate mRNA, generate cDNA libraries, PCR, clone cDNA sequences into expression vectors, site-directed mutagenesis, and standard molecular biology experiments.
- ~ Conduct detailed observations, analyze data, interpret and report results.
- ~ Work as part of a team with other staff members.
- ~ Oversee experiments of other team members.
- ~ Keep an accurate and detailed laboratory notebook.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS in Biology, Molecular Biology, Genetics, Biochemistry or related field, or equivalent level of demonstrated knowledge.
- ~ Experience in laboratory procedures and protocols with expertise in molecular biology and protein analysis.
- ~ Experience in cDNA library construction, PCR, mutagenesis and standard molecular biology techniques.
- ~ Experience conducting standard molecular biology experiments including cloning genes and creating expression vectors.
- ~ Excellent interpersonal skills and experience performing collaborative research in a team environment.
- ~ Experience both working independently, and overseeing and providing work direction to others.
- ~ Strong written and verbal communication and presentation skills.
- ~ Strong organizational and record keeping skills.
- ~ Competent in use of PC and UNIX operating systems.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Experience in the use of molecular biology software and database skills.

SECURITY: Anticipated clearance level: P

EMPLOYMENT REP: Linda McMullen

BIOMEDICAL SCIENTIST(225.0) - #BS-3059 - Biology and Biotechnology Research Program Directorate/Joint Genome Institute - 9863

Date: 10/25/01 **Salary:** Open

NOTE:

This is a Flexible Term (at will) appointment, not to exceed six years. This appointment is at the DOE Joint Genome Institute located in Walnut Creek, California.

NATURE AND SCOPE OF POSITION:

The Biology and Biotechnology Research Program has an opening in the Functional Genomics group within the Joint Genome Institute (JGI). Will be responsible for development, production, and experimentation of high-density DNA microarrays to study gene expression, with the goal of developing the technology for use in a high-throughput environment. Will assemble, analyze and report data, propose future experiments, and be involved in conducting PCR, DNA sequencing, and database tracking. This position reports to the Gene Expression group leader and interacts with peers inside and outside of JGI.

ESSENTIAL DUTIES:

- ~ Collaborate in the development and implementation of technologies in cDNA microarray expression systems.

Scientific / Engineering

- ~ Design various gene primers.
- ~ PCR amplify specific genomic and cDNA regions.
- ~ Develop fluorescent probes for gene expression analysis.
- ~ Perform experiments for various microarray research projects.
- ~ Troubleshoot and optimize current microarray protocols and develop new protocols where needed to meet scientific research goals.
- ~ Train less experienced scientists/technicians in performing molecular biology experiments and protocols.
- ~ Collect and analyze data, and report results to Gene Expression Analysis Group Leader.
- ~ Keep an accurate and detailed laboratory notebook.
- ~ Attend and present technical status reports at weekly Functional Genomics meetings.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ B.S. in Genetics, Biochemistry, Molecular Biology, or related field or equivalent experience.
- ~ Extensive experience in DNA sequencing and analysis, cloning, library construction, electrophoresis, and PCR.
- ~ Experience in DNA purification, primer design, and in situ hybridization.
- ~ Familiarity with sequence databases.
- ~ Competent in use of PC and UNIX operating systems.
- ~ Strong organizational and record keeping skills.
- ~ Excellent interpersonal skills for working in a team environment.
- ~ Strong written and verbal communication skills.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Bioinformatics experience.

SECURITY: Anticipated clearance level: P

EMPLOYMENT REP: Linda McMullen

BIOMEDICAL SCIENTIST(225.0) - #BS-3128 - Biology and Biotechnology Research Program Directorate/ Molecular and Structural Biology Division - 9681

Date: 11/1/01 **Salary:** Open

NOTE:

This posting has multiple openings. These are flexible term (at will) appointments, not to exceed six years.

NATURE AND SCOPE OF POSITION:

The Molecular and Structural Biology Division of the Biology and Biotechnology Research Program (BBRP) has multiple openings for biomedical scientists to conduct research relating to nucleic acid synthesis and manipulation. These may include such areas as detection of single base changes in DNA and RNA using Rolling Circle Amplification, gene synthesis, and micromanipulation of single cells. Will interact with a multidisciplinary team of molecular biologists, engineers and chemists, and report directly to the project manager.

ESSENTIAL DUTIES:

- ~ Conduct research in nucleic acid synthesis and manipulation. Design and troubleshoot experiments for detection of single base changes in DNA and RNA using Rolling Circle Amplification, gene synthesis, or micromanipulation of single cells.
- ~ Collaborate with project leader and team members to set objectives of and

design experiments.

- ~ Attend and present technical status reports at regular project meetings.
- ~ Contribute to the transfer of data to the sponsor by maintaining comprehensive laboratory notebooks and assisting in the preparation of manuscripts for peer-reviewed journals.
- ~ Collaborate in the development of new technologies to improve research with nucleic acid synthesis and manipulation.
- ~ Contribute to general lab maintenance and follow laboratory safety procedures.

MARGINAL DUTIES:

- ~ Supervise undergraduate students working in the laboratory.
- ~ Maintain familiarity with current related scientific literature.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BA/BS in biology or chemistry, or equivalent level of demonstrated knowledge.
- ~ Experience conducting laboratory research using standard molecular biology techniques.
- ~ Knowledge of standard laboratory equipment and safety procedures.
- ~ Knowledge of either Macintosh or PC platforms, as well as with common spreadsheet and word processing software.
- ~ Experience both working as part of a laboratory team to meet specified goals, and working independently and troubleshooting experiments.
- ~ Excellence in interpersonal skills, e.g. written and oral communication, to effectively communicate in a diverse team environment.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Knowledge of recent advances in molecular biology and chemistry.

SECURITY: Anticipated clearance level: None

EMPLOYMENT REP: Linda McMullen

BIOMEDICAL SCIENTIST(225.0) - #BS-3211 - Biology and Biotechnology Research Program Directorate/Joint Genome Institute - 9863

Date: 11/16/01 **Salary:** Open

NOTE:

This is a Flexible Term (at will) appointment, not to exceed six years. This appointment is at the DOE Joint Genome Institute located in Walnut Creek, California.

NATURE AND SCOPE OF POSITION:

The Biology and Biotechnology Research Program has an opening in the Functional Genomics Protein Expression and Purification Group within the Joint Genome Institute. Responsible for performing and optimizing protocols for the expression and purification of proteins, and their biochemical characterization, and for the developing of protocols to identify the DNA binding specificity of proteins. In a diverse, research team environment, this position reports to the Proteomics Manager.

ESSENTIAL DUTIES:

- ~ Design, develop and perform experiments in the following areas: Bacterial transformation and SDS-PAGE, protein expression analysis, protein characterization, protein purification using affinity and gel filtration chromatography, and standard molecular biology and biochemistry experiments.
- ~ Design, develop and implement protocols for the identification of DNA binding sites of proteins.
- ~ Attend and present research results at lab meetings.
- ~ Prepare and maintain lab stock solutions and reagents.

Scientific / Engineering

~ Keep an accurate and detailed laboratory notebook.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS in Biology, Molecular Biology, Genetics, Biochemistry or related field, or equivalent level of demonstrated knowledge.
- ~ Experience performing experiments in protein expression, purification, and characterization using various molecular biology procedures.
- ~ Analyze detailed data, troubleshoot, and report results.
- ~ Organizational and detail oriented skills necessary for working in a lab environment.
- ~ Interpersonal skills necessary for working in a team environment.
- ~ Communication skills necessary for working with diverse teams, giving technical presentations, documenting and reporting research results.
- ~ Competency in use of PC and UNIX operating systems.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Required unless more specific.
- ~ Experience leading other team members.

SECURITY: Anticipated clearance level: P

EMPLOYMENT REP: Linda McMullen

ENVIRONMENTAL ANALYST(230.0) - #EP-2906 - Environmental Protection Department (EPD)/Operations and Regulatory Affairs Division (ORAD) - 9692

Date: 10/23/01 **Salary:** Open

NOTE:

This is a Flexible Term (at will) appointment, not to exceed six years. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Environmental Evaluations Group (EEG) in the Operations and Regulatory Affairs Division has an opening for an Environmental Analyst. The incumbent will report to the EEG Group Leader and provide guidance to LLNL-wide Programs, prepare environmental impact assessment documents, and coordinate with DOE, California, UC, and Federal Agency regulators on LLNL compliance with the National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), and Endangered Species Act (ESA), the Antiquities Act, and related Federal Executive Orders and regulations, such as those on wetlands and floodplains.

ESSENTIAL DUTIES:

- ~ Evaluate proposed Laboratory projects and actions for potential environmental impacts including those involving human safety and health, air and water quality, and sensitive resources such as threatened and endangered species, and wetlands/floodplains.
- ~ Coordinate and consult with DOE, UC, DTSC, and other federal agencies; provide guidance on policies and guidelines to LLNL-wide Programs/Directorates in meetings relating to environmental compliance requirements of the NEPA, CEQA, and other resource-related Federal and State Acts and regulations, as well as DOE Orders, regulations, and guidance/policies.
- ~ Prepare environmental documents under the NEPA, CEQA, and ESA for all proposed projects at LLNL, including DOE Environmental Impact Statements and UC Environmental Impact Reports, DOE Environmental Assessments, DTSC and UC Initial Studies, DOE Findings of No Significant Impact, DTSC and UC

Categorical Exemptions and Environmental Impact Classifications, LLNL NEPA Guidance Request Responses, LLNL NEPA Records of Review, DOE Mitigation Action Plans, UC Mitigation Monitoring and Reporting Program Plans, DOE NEPA Notices of Intent to Prepare an EA or EIS, DOE EIS Records of Decision, and sensitive resource-related Federal Register Notices, Federal Wetlands and Floodplains Assessments, literature reviews, risk assessments, and field survey reports of the potential impact of LLNL and other Federal projects on sensitive resources.

~ Assist LLNL ES&H Working Group, EPD management, and DOE/OAK in developing LLNL-wide guidance to implement NEPA, CEQA, UC, DOE, EPA, and State environmental regulatory requirements.

~ Monitor the progress of contractor personnel assigned to prepare NEPA and CEQA documents.

~ Implement approved procedures in preparing, archiving, and tracking the status of NEPA and CEQA documents.

MARGINAL DUTIES:

~ Conduct field surveys in steep rough terrain for the potential impact of LLNL operations on threatened or endangered species, wetlands and floodplains, or paleontological resources.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

~ BS in physical, biological, or environmental science; engineering; or equivalent fields or equivalent level of demonstrated knowledge.

~ Direct experience in applying NEPA and CEQA/ESA/wetland/floodplain requirements to Federal and California agency projects.

~ Demonstrated excellent writing skills.

~ Demonstrated ability to identify, define, predict, and report the environmental impacts of complicated technical research, construction, and infrastructure projects through course work or experience.

~ Demonstrated ability to synthesize, compare, and analyze both hypotheses and conclusions based on scientific data from diverse fields such as chemistry, geology, physics, engineering, human health and safety, meteorology, or paleontology; or a combination of these elements through coursework or experience.

~ Experience in implementing and understanding of NEPA and CEQA; a basic understanding of risk assessment techniques.

~ Ability to communicate effectively with LLNL Program/Technical Managers, DOE staff, Health & Safety professionals, and the staffs of outside regulatory agencies and clients.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

~ MS in physical, biological, environmental science, engineering, or equivalent fields or equivalent level of demonstrated knowledge.

~ Demonstrated experience in implementing the ESA and Antiquities Act, and conducting surveys of these sensitive resources.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Stacy Page

ENVIRONMENTAL ANALYST(230.0) - #EP-2911 - Environmental Protection Department/Operations and Regulatory Affairs Division - 9692

Date: 10/23/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

Scientific / Engineering

The Environmental Operations Group (EOG) of the Operations and Regulatory Affairs Division (ORAD) is seeking an Environmental Analyst to plan and direct assessment and corrective action activities, and provide environmental compliance support necessary to assist the Laboratory in meeting environmental compliance requirements. This position reports to the EOG Group Leader and interacts with all levels of management internal and external to the Laboratory.

ESSENTIAL DUTIES:

- ~ Interpret and document pertinent Federal, State, and local environmental regulations, as well as UC and DOE programs and Orders.
- ~ Recommend environmental protection policies to the programs and departments throughout the Laboratory.
- ~ Conduct technical analyses and audits of experiments, operations and facilities to identify potential environmental problems and negotiate/recommend resolutions.
- ~ Assist in determining alternatives for control or corrective action.
- ~ Prepare Laboratory responses to regulatory agency requests.
- ~ Provide emergency response guidance to mitigate consequences of accidental releases.
- ~ Emergency response work during on and off-hours.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS degree in Environmental Sciences, Environmental Engineering, Chemistry, or similar degree or equivalent level of demonstrated knowledge.
- ~ Demonstrated experience in environmental compliance/management.
- ~ Excellent working knowledge of environmental regulations related to hazardous waste, and a general knowledge of air and water regulations.
- ~ Demonstrated experience in implementing environmental regulations.
- ~ Excellent verbal and written communication skills.
- ~ Experience in negotiating and solving complex environmental issues/problems.
- ~ Excellent customer service orientation.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS degree in Environmental Sciences, Environmental Engineering.
- ~ Experience negotiating with regulatory agencies.
- ~ Experience in environmental incident response.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Stacy Page

ENVIRONMENTAL SCIENTIST(230.0) - #EP-2998 - Environmental Protection Dept/Environmental Restoration Division - 9694

Date: 11/12/01 **Salary:** Open

NOTE:

This is a Flexible Term (at will) appointment, not to exceed six years.

NATURE AND SCOPE OF POSITION:

The Environmental Restoration Division (ERD) has an immediate opening for an experienced Environmental Scientist to provide geospatial data analysis, geographic information systems mapping and computer aided design expertise. This scientist will be responsible for creating and maintaining well location maps in AutoCAD and ArcView, and for providing analysis of geophysical and geological data for the ground water wells at Livermore Site and Site 300. Additional activities will involve developing Oracle database access tools for the geospatial and geological data. Interactions are primarily with group scientists and division

staff members. Reports to the Information Systems Management Group Leader.

ESSENTIAL DUTIES:

- ~ Create, update and maintain all of ERD's well location maps using ArcView and ArcGIS.
- ~ Provide geological cross sections of the subsurface using AutoCAD's programming tool.
- ~ Analyze, organize, maintain and assist in the development of web based applications for accessing geophysical, geological and hydraulic data.
- ~ Provide well location information using a Global Positioning System (GPS) unit in the field.
- ~ Provide scientific expertise to the ISM Group for geophysical, hydraulic and geological data.

MARGINAL DUTIES:

- ~ Participate in task and group planning meetings.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS degree in geology, or a related environmental science field, or equivalent combination of education and experience.
- ~ Demonstrated strong background in analyzing environmental data.
- ~ Knowledge and experience using ArcView and ArcGIS.
- ~ Knowledge and experience using AutoCAD and Geographic Information System (GIS) software.
- ~ Demonstrated knowledge of Oracle, or other relational database management systems.
- ~ Demonstrated oral and written communication skills.
- ~ Knowledge and experience with GPS unit for collecting well location data.
- ~ Experience using Structured Query Language (SQL) and Oracle's procedural language -PL/SQL.
- ~ Experience with field data collection activities.
- ~ Ability to work with others in a multidisciplinary environment.
- ~ Advanced AutoCAD skills with knowledge of AutoCAD's proprietary programming language.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS degree in geology, or a related environmental science field.
- ~ Experience with HTML, Perl and Java for web tool development.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Stacy Page

ENVIRONMENTAL SCIENTIST(230.0) - #EP-3066 - Environmental Protection Department/Hazardous Waste Management Division - 9695

Date: 11/5/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

Working independently with minimal direction, provides highly advanced technical support in establishing, directing, leading or independently conducting technical projects, experiments, and processes in the Hazardous Waste Management Division of the Environmental Protection Department. Ensures the radioactive waste generated from LLNL operations is packaged and characterized in accordance with all applicable standards. Actions have a high consequence of error. Collaborates with high level technical personnel throughout the Laboratory,

Scientific / Engineering

such as environmental professionals and senior managers, with frequent contact with technical and administrative personnel outside work unit. Interacts with personnel at other DOE sites and government/commercial facilities. Reports to Waste Generator Services Group Leader.

ESSENTIAL DUTIES:

- ~ Interpret and apply complex State and Federal regulatory requirements on incoming waste requisitions for the purpose of properly characterizing waste.
- ~ Approve waste for on-site storage.
- ~ Perform verification of packaged waste for disposal.
- ~ Analyze information provided by the waste generator and the analytical laboratories for the purpose of waste identification/characterization.
- ~ Review waste packaging procedures to support operations in the field.
- ~ Independently identify, analyze, and provide solutions and alternative approaches to radiological characterization problems.
- ~ Advanced knowledge of radioactive waste regulations.
- ~ Plan work schedule to meet deadlines and maintain compliance in facilities.
- ~ Provide training and mentoring to technologists and other personnel.
- ~ Collaborate with waste generators and HWM personnel in the sampling, characterization, identification, labeling, and segregation of wastes for disposal.
- ~ Collaborate with Field Operations Coordinator on special projects, such as decontamination and demolition of facilities.
- ~ Perform complex data validation as an ongoing task in order to assure quality of information on regulatory and DOE reports.
- ~ Collaborate with Field Operations Coordinator on special projects, such as the movement of waste containers to an off-site Treatment, Storage, and Disposal Facility (TSDF).
- ~ Collaborate with other DOE sites or similar government/commercial facilities in the management of radioactive or mixed waste.
- ~ Review radioactive waste streams for regulatory compliance with on- and off-site TSDFs, including initiation of shipping profiles.
- ~ Independently solve complex technical problems involving legacy waste issues.
- ~ Develop field testing techniques for wide variety of waste matrices, including wastes with more than one matrix.
- ~ Interpret radioassay data.
- ~ Design and implement various radioassay techniques.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Bachelors degree in Radiochemistry, Nuclear Engineering, Health Physics, or a related scientific discipline with extensive related experience in Waste Management or equivalent combination of education and experience.
- ~ Demonstrated broad, advanced specialized expertise in radiochemistry or health physics and the skills, knowledge, and ability to interpret analytical data.
- ~ Demonstrated advanced experience interpreting State and Federal laws regulating waste.
- ~ Demonstrated advanced knowledge of the Material Safety Data Sheets (MSDS) system.
- ~ Demonstrated advanced ability to use radioassay equipment in the characterization of radioactive waste.
- ~ Ability to wear respiratory protection equipment, climb ladders to 25 feet, lift 50 pounds on a regular basis, and operate a fork truck.
- ~ Ability to provide significant technical input on safety documents, such as Hazards Assessments.
- ~ Demonstrated highly advanced knowledge and expertise in waste acceptance criteria for waste disposal facilities.
- ~ Demonstrated highly advanced ability to understand all health and safety aspects of waste management activities.
- ~ Excellent communication skills, both verbal and written.
- ~ Well organized, reliable, and proactive in dealing with others.
- ~ Demonstrated ability to work productively in stressful conditions while maintaining focus.

- ~ Demonstrated ability to be flexible in an environment of continually changing priorities.
- ~ Demonstrated speaking skills, such as classroom training experience.
- ~ Project management skills.
- ~ Demonstrated interpersonal skills.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Advanced computer skills including Word-processing and database manipulations skills.
- ~ Advanced knowledge of shipping procedures for low level, mixed, or explosive waste streams.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Stacy Page

CHEMIST(242.0) - #CH-3068 - Chemistry and Materials Science Directorate/Analytical and Nuclear Chemistry Division - 9806

Date: 10/24/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

Analytical & Nuclear Chemistry Division (ANCD) has an immediate opening in the Chemistry & Materials Science Environmental Services (CES) program for a scientist with extensive knowledge of chemical and radiochemical characterization techniques, to serve as Deputy Program Element Leader for Laboratory Operations and Technical Services. As a member of the CES management team, will be responsible for daily operations of CES analytical laboratories, including addressing generation of quality analytical data, personnel assignments and relations, ES&H issues, and serving as the primary CES Technical Customer Representative on analytical subjects. CES is a State of California ELAP certified laboratory performing standard EPA/SW846, ASTM, ANSI and DOE-prescribed methods for the analysis of priority organic, inorganic and radiochemical pollutants in wastewater, hazardous solid waste, mixed waste and environmental samples, for compliance with state and DOE regulations on waste management and site environmental monitoring measures. Collaborates with customers and scientific personnel internal and external to LLNL to meet customer needs. Reports administratively to the ANCD Program Element Leader for CES.

ESSENTIAL DUTIES:

- ~ Set priorities, manage resources and achieve scientific and business goals.
- ~ Develop, document and train technical personnel on standard and new analytical methodologies for use in CES to ensure technical excellence in analytical data.
- ~ Conduct laboratory ES&H self-assessments.
- ~ Collaborate with scientists, engineers and technicians internal and external to LLNL to develop customers, project contracts, and to enhance business partnerships.
- ~ Identify, analyze, and provide original solutions and alternative approaches to complex business and technical problems within CES.
- ~ Perform sample digestion/preparation, standardization and instrument set-up and maintenance.
- ~ Acquire, reduce, interpret and report complex data.
- ~ Develop a working knowledge of the strengths and limitations of complementary analytical techniques.
- ~ Present scientific work through formal and informal reports, presentations and peer-reviewed publications.

MARGINAL DUTIES:

- ~ Direct technical staff in performing sample analyses.
- ~ Prepare standard operating procedures and related health and safety documents as needed.
- ~ Develop successful proposals for research and development activities with internal and external sponsors.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BA/BS in analytical, physical, or nuclear chemistry, or equivalent level of demonstrated knowledge.
- ~ Experience applying a wide range of analytical and nuclear chemistry techniques to the characterization of hazardous waste and environmental samples for chemical pollutants and radionuclides at the trace to high-level concentrations.
- ~ Demonstrated broad expertise in QA/QC requirements of a California-certified, ISO 17025, ISO 9000 and DOE Orders series analytical laboratory.
- ~ Experience managing projects and supervising and training scientific staff.
- ~ Demonstrated ability to manage a varying workload while meeting tight time constraints and multiple program deliverables.
- ~ Effective communication and interpersonal skills and excellent customer service orientation.
- ~ Experience in the operation and maintenance of one or more of the following analytical and radioanalytical instruments: ICP-AES, ICP-MS, CVAA, GFAA, GC, GCMS, LSC, alpha spectrometry, and HPGe gamma spectroscopy.
- ~ Experience performing elemental and isotopic analysis at trace levels.
- ~ Experience operating PC and/or Macintosh computers using common software packages for quality control tracking, data reporting and interpreting and translating data packages.
- ~ Experience developing and coordinating analytical contracts both internal and external to LLNL.
- ~ Ability to write and present successful proposals and represent LLNL capabilities to secure funding.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Working knowledge of federal and state environmental monitoring and hazardous waste management regulations.
- ~ Familiarity with Hazardous Waste Management programs.
- ~ Ability to communicate clearly and effectively with non-technical personnel on requirements for, and limitations of, analytical techniques.
- ~ General knowledge of LLNL policies and procedures.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Teri Kobayashi

CHEMIST/GEOCHEMIST(242.0) - #CH-3071 - Chemistry and Materials Science Directorate/Analytical and Nuclear Chemistry Division - 9806

Date: 11/7/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

Analytical & Nuclear Chemistry Division (ANCD) has an immediate opening for a chemist with broad knowledge of weapons diagnostics, nuclear fission, chemical separations low-energy nuclear reactions and geological processes, and the ability to apply these to problems associated with the impact of the underground environment on the chemical fractionation of nuclear debris during condensation following detonation. Will collaborate with scientists in re-evaluating historical

nuclear test program radiochemistry data to develop new interpretation methods, and to define and perform experimental measurements that will improve LLNL's ability to certify the aging nuclear stockpile. Reports administratively to the ANCD Program Element Leader for Stockpile Radiochemistry.

ESSENTIAL DUTIES:

- ~ Lead scientific effort in specific areas of research involving the development of new techniques for incorporating geological data and methods into traditional radiochemical diagnostics.
- ~ Provide technical leadership in chemical separations as applied to problems in nuclear fission, thermonuclear burn, light-charged-particle nuclear reactions, and heavy-element isotopic analysis.
- ~ Analyze and interpret complex radiochemical data from nuclear explosion debris.
- ~ Maintain experimental radiochemical diagnostics capabilities for application to new problems in the analysis of US and foreign device debris.
- ~ Develop methods for converting radiochemistry diagnostics tools into predictive tools.
- ~ Develop new chemical separation methods and techniques as required.
- ~ Prepare samples for analysis by alpha and gamma spectrometry and mass spectroscopy. Work with radioactive material in glove boxes and fume hoods.
- ~ Collaborate with weapons designers on matters involving radiochemical diagnostics.
- ~ Collaborate with scientists, engineers and technicians internal and external to LLNL to accomplish program goals.
- ~ Present scientific work through formal and informal reports and presentations in both classified and unclassified settings.

MARGINAL DUTIES:

- ~ Develop proposals for research and development activities with internal and external sponsors.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS in chemistry, geochemistry, radiochemistry, geology, or equivalent level of demonstrated knowledge.
- ~ Broad expertise in nuclear processes, nuclear fission, low-energy nuclear reactions, and detection of radiation.
- ~ Broad expertise in geochemistry analytical techniques, including field experience.
- ~ Experience analyzing and interpreting radiochemical data.
- ~ Experience working as a member of a scientific team or as an independent researcher.
- ~ Effective written, verbal and interpersonal skills.
- ~ Experience operating PC and/or Macintosh computers using common software for analyzing and interpreting data.
- ~ Ability to travel.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Broad understanding of stockpile stewardship needs and issues.
- ~ Ability to write and present successful proposals and represent LLNL capabilities to secure funding.

SECURITY: Active DOE Q clearance required at time of hire.

EMPLOYMENT REP: Teri Kobayashi

CHEMIST(242.0) - #CH-3173 - Chemistry & Materials Science Directorate/Analytical & Nuclear Chemistry Division - 9806

Date: 11/14/01 **Salary:** Open

NOTE:

Scientific / Engineering

This requisition has multiple openings; these are Flexible Term (at will) appointments, not to exceed six years. If final candidates are Indefinite Career employees, Indefinite Career status will be maintained should funding allow. Lab employees and external candidates may be considered for these positions.

NATURE AND SCOPE OF POSITION:

Chemistry and Materials Science (CMS) Directorate has multiple openings for analytical chemists to perform analyses on environmental and hazardous waste samples, develop new analytical methods and set up instrumentation and equipment in support of CMS Environmental Services (CES). CES is a State of California ELAP certified laboratory performing analysis of priority organic, inorganic and radiochemical pollutants in wastewater, hazardous solid waste and environmental samples, for compliance with state and DOE regulations. Will represent organization to internal and external customers, and collaborate as needed with LLNL programs. Will interact with laboratory scientists, engineers, technicians and administrative support. Positions report to CES Program Element Leader.

ESSENTIAL DUTIES:

- ~ Develop new and enhance existing methods of analyses and instrumentation.
- ~ Collaborate with customers to determine and apply analytical methods best suited for their needs.
- ~ Prepare and analyze complex hazardous and mixed waste samples for low concentrations of inorganic and organic priority pollutants or radionuclides.
- ~ Maintain instrument performance levels through routine maintenance.
- ~ Perform sample preparation and standardization.
- ~ Acquire, reduce, interpret and report data.
- ~ Prepare EPA Contract Laboratory Program (CLP) reports and documentation.
- ~ Maintain a working knowledge of strengths and limitations of complementary analytical techniques.
- ~ Operate PC and/or Macintosh computers using common software packages and database management software, for reporting and translating data.

MARGINAL DUTIES:

- ~ Direct technicians performing sample analyses.
- ~ Prepare standard operating procedures and health and safety documents.
- ~ Develop successful proposals for research and development activities with internal and external sponsors.
- ~ Present work through formal and informal reports, presentations and peer-reviewed publications.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BA/BS in Chemistry or related field, or equivalent level of demonstrated knowledge.
- ~ Experience developing analytical methods and instrumentation, and ability to interpret complex analytical data.
- ~ Experience in the operation and maintenance of modern analytical instrumentation.
- ~ Experience working with and handling radioactive materials, especially radioanalytical experience.
- ~ Experience working with Contract Laboratory Practice (CLP) protocols.
- ~ Experience with EPA SW846 methods for the analysis of solid waste; EPA, ASTM and APHA methods for the analysis of water and wastewater.
- ~ Ability to manage a varying workload while meeting tight time constraints.
- ~ Ability to organize laboratory operations efficiently and precisely, maintaining a high degree of data quality and good laboratory practice.
- ~ Ability to perform typical analytical laboratory physical tasks such as manipulating small objects with fine motor control, lifting objects up to 25 lbs. in the range of floor to shelf level, and visually observing chemical reactions.
- ~ Effective oral and written communication and interpersonal skills.
- ~ Experience operating PC and/or Macintosh computers to translate and report scientific data.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Experience providing procedural guidance to others.
- ~ Experience preparing and analyzing environmental and hazardous waste samples for elemental and isotopic constituents including radionuclides and priority chemical pollutants ranging from trace to high-level concentrations.
- ~ Experience in the operation and maintenance of one or more of the following analytical, radioanalytical, nuclear instrumentation: ICP-AES, ICP-MS, CVAA, GFAA, GC, GC-MS, HPLC, LC-MS, liquid scintillation counting, alpha spectrometry and low- and high-resolution gamma spectroscopy.
- ~ Experience working in a compliance-related analytical laboratory setting.
- ~ Experience with QA/QC protocols as applied to analytical laboratories, such as ISO 17025, DOE Orders, ISO 9000 and 17000, and to Environmental Protection Agency requirements in particular.
- ~ Ability to communicate effectively with non-technical personnel on requirements for, and limitations of, analytical techniques.
- ~ Experience developing research proposals and acquiring funding.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Teri Kobayashi

WASTE MINIMIZATION ENGINEER(249.0) - #EP-2909 - Environmental Protection Department/Operations and Regulatory Affairs Division - 9692

Date: 10/23/01 **Salary:** Open

NOTE:

This is a Flexible Term (at will) appointment, not to exceed six years. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Permits and Regulatory Affairs Group (PRAG) in the Operations and Regulatory Affairs Division within the Environmental Protection Department has an Environmental Analyst opening. This position will perform pollution prevention engineering. This position will be responsible for providing technical assistance to Program operations across the Laboratory by assisting in the implementation of the overall Laboratory Waste Minimization Program. The individual will work with LLNL personnel at all levels and DOE OAK to further develop LLNL and DOE pollution prevention programs and provide project management for pollution prevention implementation projects.

ESSENTIAL DUTIES:

- ~ Prepare formal regulatory documents to demonstrate Laboratory compliance with Federal, State, and local waste minimization regulations and DOE Orders and requirements.
- ~ Interact with Laboratory Programmatic waste generators on waste minimization assessments, evaluation activities, and technology development.
- ~ Help to develop implementation proposals by providing information on concepts, applications, and potential technologies that may be applicable to the waste generating processes.
- ~ Participate in publishing formal technical LLNL reports and presenting technical papers at DOE and professional trade association workshops on waste minimization.
- ~ Perform total cost benefit analysis and prepare funding proposals.
- ~ Participate in LLNL's Pollution Prevention Awareness Program.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS in Chemical, Mechanical or Environmental Engineering, Environmental

Scientific / Engineering

Science/Management, or equivalent level of demonstrated knowledge in the area of waste minimization.

- ~ Demonstrated knowledge of environmental regulations related to pollution prevention, hazardous waste, radioactive and mixed waste, high explosive waste management, and a general knowledge of air and water regulation, both State and Federal.

- ~ Strong communication skills, both written and oral, and excellent interpersonal skills.

- ~ Demonstrated solid organizational skills with ability to work on a number of projects concurrently and to independently determine priorities and goals.

- ~ Demonstrated ability to effectively present technical papers to an audience.

- ~ Demonstrated ability to perform cost benefit analysis and prepare funding proposals.

- ~ Demonstrated knowledge and ability to use computer software spreadsheet Excel, including creating and using pivot tables.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS in Chemical, Mechanical or Environmental Engineering, Environmental Science/Management.

- ~ Demonstrated knowledge of DOE Orders and Executive Orders relating to environmental regulations.

- ~ Demonstrated knowledge of computer software: Microsoft Word, 4-D, Netscape, Eudora, and Meeting Maker.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Stacy Page

ENGINEER/GROUP LEADER(249.0) - #ME-2810 - Mechanical Engineering/Defense Technologies Engineering Division - 9776

Date: 10/22/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Only Indefinite Career status employees may apply. This position is a 2-year rotating assignment.

NATURE AND SCOPE OF POSITION:

Defense Technologies Engineering Division (DTED) seeks a Group Leader for the Nuclear Test Operations' (NTO) Field Engineering and Project Management Group (FE&PM). Responsible for project planning and execution, including managing resources, schedules, and manpower levels to accomplish the requirements and goals of projects in support of N and B Program experimental research and development activities, including sub critical experiments (SCE) and Jasper. Assures engineering adequacy and quality for programmatic support. Administrative responsibility for a technical group, including civil, mechanical, electronic, and chemical engineers. Charters, leads, and participates in design reviews, management assessments, and operational readiness reviews. Interactions include high level management internal and external to the Laboratory, including project physicists/engineers, and DOE and contractor professionals. Administratively reports to the Nuclear Test Operations Resident Manager. Requires frequent travel to/from Livermore, and to Nevada Test Site (NTS) forward area locations where activities are performed in conditions consistent with a field and schedule-oriented environment. This may be a Change of Station assignment.

ESSENTIAL DUTIES:

- ~ Provide overall technical leadership of a broad set of technical issues related to experimental fielding operations, including engineering requirements definition, system design, contractor construction, and hardware acceptance and certification.

- ~ Evaluate programmatic engineering needs and prioritizes technical staff efforts

across a wide range of projects.

- ~ Provide engineering specifications, direction, and oversight of Group, DOE contractor, and subcontractor engineering functions.

- ~ Assure the excellence of engineering for experimental work in the field.

- ~ Responsible in all activities for Safety, ES&H, compliance with Work-Smart standards, Security, and Quality Assurance.

- ~ Chair and participate in Design Reviews.

- ~ Manage resources and manpower requirements for group activities.

- ~ Represent Group in timely status reports to Program and Division Management.

- ~ As a member of DTED management, participate in hiring, career development, performance reviews and ranking.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS in Engineering or related scientific fields or equivalent demonstrated knowledge and experience.

- ~ Knowledge of LLNL Defense Program experimental activities including design, fabrication and fielding.

- ~ Experience in mechanical, high pressure and vacuum systems design, fabrication and operation.

- ~ Experience in construction engineering.

- ~ Experience in project management of technical projects and experiment-related activities involving multidisciplinary teams, critical deadlines and high technology equipment and facilities.

- ~ Demonstrated organizational, administrative, interpersonal, and communication skills, including written and oral presentations.

- ~ Demonstrated abilities in resource management and manpower planning.

- ~ Knowledge of ES&H, personnel and procurement standards, policies and procedures.

- ~ Knowledge and understanding of technical goals of Laboratory programs conducting work at NTS.

- ~ Knowledge of LLNL design standards manuals and practices. Experience in reviewing and troubleshooting multi-disciplined designs.

- ~ Ability to work and lead others to work towards objectives in a self-directed manner.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS in Engineering or related scientific fields or equivalent combination of education and experience.

- ~ Experience with high explosive system or shock physics experimental research.

- ~ Experience with Nevada Test Site Operations.

- ~ Knowledge of the organization and operations of DOE Nevada, Tri Laboratories, and NTS contractor infrastructure.

- ~ Knowledge of DOE/LLNL Nuclear Explosives Safety.

- ~ Supervision experience, including experience in preparation of performance reviews, ranking and salary management.

SECURITY: Active DOE Q clearance required at time of hire.

EMPLOYMENT REP: Patty Revell

ENGINEER(249.0) - #ME-3082 - Mechanical Engineering/Defense Technologies Engineering Division - 9775

Date: 10/26/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

Defense Technologies Engineering Division seeks a Mechanical Engineer to work in the Initiation Systems Group. This group is responsible for the conceptual design, development, qualification, and production oversight of detonation/safing assemblies for LLNL weapons. These systems include exploding bridgewire, slapper, and optical detonators and mechanical safe-and-arm-devices. The successful candidate will provide technical leadership in a wide range of projects to ensure that LLNL initiation systems meet reliability, safety, and programmatic requirements. Will interface with technicians, engineers, and scientists within LLNL and with outside agencies including LANL, SNL, Allied-Signal-Kansas City, and Pantex. This position reports to the Initiation Systems Group Leader.

ESSENTIAL DUTIES:

- ~ Create conceptual designs of mechanical and electrical initiation systems and to define engineering requirements.
- ~ Resolve a wide variety of initiation system production and test issues involving detonation physics, optical diagnostics, and laser velocimetry.
- ~ Resolve a wide variety of mechanism production and test issues involving mechanism kinematics/dynamics and changes in metallurgical properties with age or wear.
- ~ Participate in engineering test operations, analysis of results, and documentation of results in reports.
- ~ Perform detailed planning, scheduling, and budgeting of project activities.
- ~ Collaborate with the group leader and lead engineers in strategic and budgetary planning.
- ~ Direct production and test activities at the Production Agencies.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS in Mechanical Engineering or equivalent education or experience.
- ~ Demonstrated experience with mechanical hardware design, structural mechanics, manufacturing project engineering, and mechanical drawing interpretation per ANSI Y14.5.
- ~ Demonstrated ability to represent LLNL and to direct activities at outside agencies.
- ~ Demonstrated ability to work as a member of an interdisciplinary team of professional and technical personnel, and on an independent self-directed basis.
- ~ Demonstrated ability to collect, analyze, and report data, trends and technical results.
- ~ Demonstrated knowledge of routine computer software such as Microsoft Word, Excel, or equivalent, and project scheduling software.
- ~ Demonstrated oral and written communication skills.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS in Mechanical Engineering or equivalent education or experience.
- ~ Experience with high explosive initiation systems.
- ~ Experience with high-speed optical diagnostics, laser velocimetry, or detonation physics.
- ~ Experience in design of complex, miniature mechanisms.
- ~ Experience with Nuclear Weapon engineering design and manufacturing requirements.
- ~ Demonstrated knowledge of DOE Weapons Complex operations and procedures.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Patty Revell

**DEPUTY ASSOCIATE PROJECT MANAGER FOR
PRODUCTION(249.0) - #ME-3143 - Mechanical
Engineering/Laser Science Engineering Division - 9773**

Date: 11/1/01

Salary: Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

Mechanical Engineering (ME) Laser Science Engineering Division (LSED) has an opening for a Production Manager to support the Assembly, Installation and Refurbishment (AIR) Organization within National Ignition Facility (NIF) Project. Will be responsible for managing and coordinating the day-to-day activities in three class 100 facilities which assemble, test and install large, complex opto-mechanical line replaceable units (LRUs) for the NIF laser system. The AIR organization currently consists of 55 engineers and technicians and will grow to ~85 over the next few years. This individual will be a key member of the NIF management team. This position requires a process-oriented individual with demonstrated abilities in a production or manufacturing environment. The successful candidate should be energetic, highly motivated, and able to work in a fast-paced, schedule-driven, one of a kind project. This position will report to the Associate Project Manager (APM) for AIR and will also serve as Deputy APM for AIR.

ESSENTIAL DUTIES:

- ~ Provides daily management of four functional groups responsible for LRU assembly, installation, optics processing and refurbishment.
- ~ Directly manage four engineers/group leaders with a total of 40+ engineers and technicians working in some cases on multiple shifts.
- ~ Responsible for maintaining a safe work environment and for ensuring that facilities and personnel adhere to all Environmental, Safety and Health (ES&H) requirements.
- ~ Responsible for insuring that production meets schedule, performance and quality requirements.
- ~ Ensure that facility systems and process equipment is properly maintained.
- ~ Organize production meetings and develop production reports, process metrics and performance indicators.
- ~ Participate in budget planning, scheduling and reviews.
- ~ Participate in hiring and employee development including development and implementation of training plans, and performance appraisals and goal setting.
- ~ Work closely with AIR APM on overall management and strategic planning.

MARGINAL DUTIES:

- ~ Provide feedback to engineering organizations on equipment design improvements and refinement.
- ~ Work with interface organizations including procurement acquisition and warehousing groups: commissioning, LRU and large optics groups.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS in Engineering, Manufacturing Engineering or related disciplines or equivalent combination of demonstrated knowledge and experience.
- ~ Extensive experience in production or manufacturing management.
- ~ Experience with manufacturing resource planning/enterprise resource planning (MRP/ERP) systems.
- ~ Ability to meet production goals on-schedule and on-budget.
- ~ Extensive leadership ability and demonstrated communication skills.
- ~ Ability to form, lead and motivate a multi-disciplinary team.
- ~ Experience with project management and effective organizational skills.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS in Engineering, Manufacturing Engineering or related disciplines.
- ~ Experience managing production/manufacturing activities in cleanroom facilities.

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- ~ Experience with lean manufacturing and process analysis/improvement methodologies.
- ~ Experience with failure modes and effects analysis (FMEA), reliability, availability and maintainability (RAM) data acquisition and analysis, and implementation of preventative maintenance (PM) programs.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Patty Revell

DEPUTY MATERIALS PROGRAM LEADER(270.0) - #CH-3174 - Chemistry and Materials Science Directorate/NIF Materials Program - 9809

Date: 11/5/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Only Indefinite Career status Lab employees may apply for this position.

NATURE AND SCOPE OF POSITION:

The NIF Materials Program Office (MPO) in the Chemistry and Materials Science Directorate (CMS) has an opening for a Deputy Materials Program Leader for Materials Dynamics and High Energy Density Programs Science and Technology. The NIF Materials Program Office is responsible for coordinating and ensuring the quality of the interactions between the NIF programs directorate and CMS as well as between A and B programs in DNT and CMS. In addition, the MPO is responsible for developing and implementing strategies that will lead to enhanced and successful interactions in the future. Reporting to the Materials Program Leader, the successful candidate will oversee the interactions between CMS scientists and those in NIF/ICF as well as the relevant DNT program areas (A/X and B programs). In addition, the DMPL will assist the MPL in crafting and overseeing the CMS LDRD portfolio in this subject area, fostering joint LDRD projects in the area of high energy density materials dynamics with NIF and DNT, and crafting a high energy density materials science outreach program in collaboration with the Materials Research Institute. Chosen candidate will collaborate with NIF, DNT, PAT and CMS directorates. S/he will interact with senior management and scientific personnel both internal and external to the Laboratory, including the National Nuclear Security Administration (NNSA) and its laboratories, the Department of Energy (DOE), and universities. This position provides an excellent opportunity to broaden interactions across the Laboratory and to be involved in the spectrum of new and compelling S&T efforts at the Laboratory centered on the future experimental use of NIF as a stockpile stewardship tool.

ESSENTIAL DUTIES:

- ~ Oversee and coordinate the CMS strategic planning process for High Energy Density Materials Science and prepare required reports for the CMS, NIF and DNT directorates; provide guidance and direction to the directorates.
- ~ Interact with the CMS AD office and the CMS senior management team in establishing and meeting the requirements of the CMS strategic plan in this subject area.
- ~ Participate as an active member in the CMS LDRD proposal review and selection process.
- ~ Actively help develop and promote a science outreach program in the area of materials science on high energy density facilities.
- ~ Work with and support the MPL in other efforts including personnel matrix assignments.
- ~ Establish strong relationships with all directorates to ensure quality and timely completion of CMS strategic plan in this area.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. in materials science, physics, engineering, or related disciplines or the equivalent level of demonstrated knowledge.
- ~ Knowledge of DNT materials campaigns and of the High Energy Density Physics program activities in materials.
- ~ Experience managing state-of-the-art R&D activities.
- ~ Demonstrated scientific and technical research/ publication record.
- ~ Demonstrated leadership skills necessary to oversee the CMS strategic plan.
- ~ Effective oral and written communication skills necessary to interact with and make presentations to senior technical and administrative managers.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Understanding of the Laboratory and its basic and applied-research-related programs.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Teri Kobayashi

PHYSICIST/ATMOSPHERIC SCIENTIST(270.0) - #EZ-3107 - Energy and Environment Directorate/Atmospheric Science Division - 9744

Date: 11/16/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Atmospheric Science Division (ASD) has openings for scientists experienced in atmospheric dispersion modeling and boundary-layer meteorology, numerical modeling of physical processes, high performance computing, and/or field experiments. ASD scientists pursue research focused on the development of a state-of-the-science atmospheric dispersion modeling system for predicting the consequences of hazardous material releases over multiple scales. The Division develops models for meteorological data assimilation, numerical weather prediction, and dispersion in complex meteorological, land-surface, and urban environments. Areas of current research include methods for estimating meteorological and dispersion model predictability, approaches for optimizing source-term parameters based on sensor measurements, techniques for coupling models across multiple scales, and the development of high performance computing parallelized algorithms. In addition, ASD scientists are engaged in designing, conducting, and analyzing atmospheric field experiments to test model performance. Research personnel also collaborate closely with a team of atmospheric and computer scientists to provide scientific support for a national operational atmospheric release emergency response system.

ESSENTIAL DUTIES:

- ~ Develop and present research proposals to secure funding for new and continuing projects.
- ~ Collaborate with project sponsors, provide project progress reports, and present status reviews.
- ~ Pursue independent and team research and development of data assimilation, numerical weather prediction, and/or atmospheric dispersion models.
- ~ Conduct model application studies and/or field experiments.
- ~ Provide scientific support for an operational atmospheric release emergency response system.
- ~ Publish research results in technical reports and peer-reviewed journals and

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present technical results at scientific conferences.
~ Travel as required to coordinate research with collaborators.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. in atmospheric science/physics or closely related field, or equivalent level of demonstrated knowledge.
- ~ Demonstrated experience in model development, evaluation, and applications.
- ~ Expertise in atmospheric dispersion and/or boundary-layer meteorology, including numerical weather prediction, meteorological data assimilation, and physical process parameterizations.
- ~ Computational expertise in numerical methods, modern programming languages, visualization techniques, and parallelization.
- ~ Demonstrated experience conducting both independent and team research.
- ~ Experience developing project proposals and funding.
- ~ Supervisory and project management skills and experience.
- ~ Experience collaborating effectively with a team of scientists of diverse backgrounds.
- ~ Verbal and written communication skills as evidenced by published results and presentations.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Expertise with statistical and optimization techniques.
- ~ Expertise in designing and conducting field experiments and data analysis.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Linda McMullen

PHYSICIST/ATMOSPHERIC SCIENTIST(270.0) - #EZ-3109 - Energy and Environment Directorate/Atmospheric Science Division - 9744

Date: 11/16/01 **Salary:** Open

NOTE:

These are Flexible Term (at will) appointments, not to exceed six years.

NATURE AND SCOPE OF POSITION:

The Atmospheric Science Division (ASD) has openings for scientists experienced in atmospheric dispersion modeling and boundary-layer meteorology, numerical modeling of physical processes, high performance computing, and/or field experiments. ASD scientists pursue research focused on the development of a state-of-the-science atmospheric dispersion modeling system for predicting the consequences of hazardous material releases over multiple scales. The division develops models for meteorological data assimilation, numerical weather prediction, and dispersion in complex meteorological, land-surface, and urban environments. Areas of current research include methods for estimating meteorological and dispersion model predictability, approaches for optimizing source-term parameters based on sensor measurements, techniques for coupling models across multiple scales, and the development of high performance computing parallelized algorithms. In addition, ASD scientists are engaged in designing, conducting, and analyzing atmospheric field experiments to test model performance. Research personnel also collaborate closely with a team of atmospheric and computer scientists to provide scientific support for a national operational atmospheric release emergency response system.

ESSENTIAL DUTIES:

- ~ Pursue independent and team research and development of data assimilation, numerical weather prediction, and/or atmospheric dispersion models.
- ~ Conduct model application studies and/or field experiments.
- ~ Contribute to proposal development for independent research projects.
- ~ Provide scientific support for an operational atmospheric release emergency response system.
- ~ Publish research results in technical reports and peer-reviewed journals and present technical results at scientific conferences.
- ~ Travel as required to coordinate research with collaborators.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. in atmospheric science/physics or closely related field, or equivalent level of demonstrated knowledge.
- ~ Expertise in atmospheric dispersion and/or boundary-layer meteorology, including numerical weather prediction, meteorological data assimilation, and physical process parameterizations.
- ~ Demonstrated experience in model development, evaluation, and applications and/or field experiments.
- ~ Demonstrated experience conducting both independent and team research.
- ~ Computational expertise in numerical methods, modern programming languages, and visualization techniques.
- ~ Experience collaborating effectively with a team of scientists of diverse backgrounds.
- ~ Verbal and written communication skills as evidenced by published results and presentations.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Expertise with statistical and optimization techniques.
- ~ Expertise in designing and conducting field experiments and data analysis.
- ~ Computational experience in high performance computing.

SECURITY: Anticipated clearance level: P

EMPLOYMENT REP: Linda McMullen

PHYSICIST(270.0) - #EZ-3153 - Energy and Environment Directorate/Geophysics & Global Security Division - 9743

Date: 11/12/01 **Salary:** Open

NOTE:

This is a Flexible Term (at will) appointment, not to exceed six years. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Experimental Geophysics Group in the Geophysics and Global Security Division has an opening for a physicist in the area of high-pressure materials research. The position centers on the use of multi-anvil solid medium devices to measure mechanical properties. Much of the work will be carried out using synchrotron X-radiation. The selected candidate will report to the Experimental Geophysics Group Leader.

ESSENTIAL DUTIES:

- ~ Design, construct and manage very high-pressure, high-temperature experiments.
- ~ Identify and analyze the essential physics interactions that take place when materials are subjected to mechanical loading at high pressures.
- ~ Develop new constitutive models of mechanical properties of materials, and

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apply the results to programmatic applications.

- ~ Analyze experimental results and compare with simulations.
- ~ Present work in peer review sessions and review the work of others.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Ph.D. in physics, engineering or related field, or the equivalent level of demonstrated knowledge.
- ~ Significant experience in experimental hydrology.
- ~ Experience in the use of multi-anvil and cubic-type solid medium apparatus.
- ~ Experience in X-ray synchrotron beam line techniques for measuring stress and strain.
- ~ Experience in transmission electron microscopy.
- ~ Demonstrated knowledge of modern computer systems and computational tools.
- ~ A record of completing top quality research as evidenced by publications.
- ~ Experience working effectively both individually and in a diverse, team-oriented environment.
- ~ Effective verbal and written communication skills to collaborate effectively on a research team.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

None

SECURITY: Anticipated clearance level: P

EMPLOYMENT REP: Linda McMullen

COMPUTATIONAL PHYSICIST(270.0) - #NF-2861 - National Ignition Facility Programs Directorate/ICF Program - 9872

Date: 11/12/01 **Salary:** Open

NOTE:

This is a Flexible Term (at will) appointment, not to exceed six years. Lab employees and external candidates may be considered for this position. This is a 60% time appointment.

NATURE AND SCOPE OF POSITION:

The NIF Mission Support Program (MS) has an opening for a Computational Physicist to conduct research in the area of Inertial Confinement Fusion (ICF) neutron effects. Oversee planning and executing of neutron effects experiments. Reports directly to the appropriate Group Leader in the Mission Support Program. Interactions are with scientific and engineering personnel and support staff.

ESSENTIAL DUTIES:

- ~ Perform neutron transport computations and conduct analyses of neutron effects for NIF for impact to safety, diagnostics, and cryogenics and related mechanical EMP effects.
- ~ Design neutron diagnostics for NIF as needed, to support neutron effects measurements.
- ~ Design and execute neutron effects experiments on ICF Facilities (Omega, LIL, etc.) or neutron generating facilities as needed.
- ~ Perform and manage original technical work.
- ~ Author reports and provide oral presentations for internal and external LLNL scientists.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ PhD in nuclear engineering or radiation physics or the equivalent level of demonstrated knowledge.
- ~ Demonstrated strong analytical and experimental skills.
- ~ Experience in designing, executing and analyzing experiments with knowledge of neutron characterization techniques and instrumentation.
- ~ Demonstrated written and oral communication skills in authoring technical and scientific reports, publications, invited papers, and in delivering scientific presentations.
- ~ Experience performing in a team atmosphere as well as advanced problem solving and making appropriate decisions.
- ~ Demonstrated capability to work independently, with minimal supervision.
- ~ Demonstrated ability to be self-motivated and to work in goal-oriented environment.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Experience with neutron sources, radiation detection techniques.
- ~ Experience with particle transport codes.
- ~ Experience with radiation effects of neutrons.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Alison Bradley-Carver

PHYSICIST(270.0) - #NF-3050 - National Ignition Facility Programs Directorate/Laser Science & Technology Program - 9873

Date: 11/13/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Laser Optics and Materials Associate Program within the Laser Science & Technology (LS&T) Program has an opening for a physicist/material scientist. The successful candidate will be a member of the Laser Optics and Materials Group responsible for supporting the National Ignition Facility (NIF) project. Major focus will be on identifying the precursors on DKDP samples and identifying growth characteristics of the initiation sites and isolating those exhibiting catastrophic growth. Will report directly to the Laser Optics and Materials Group Leader.

ESSENTIAL DUTIES:

- ~ Lead experiments and data interpretation concerning the initiation and growth of surface damage for fused silica optics exposed to high-fluence pulsed laser light, primarily at 0.35 μ m.
- ~ Develop and apply new spectroscopic and imaging methods to identify mechanisms of damage initiation and growth. These methods may include photothermal, IR imaging, and photoluminescence techniques.
- ~ Participate in studies of surface damage growth rates in order to make predictions of NIF optics lifetimes.
- ~ Identify contaminants and/or mechanisms leading to initiation, with the goal of improving surface finishing process to minimize initiation. Participate in the development of mitigation strategies for preventing damage growth. Mitigation strategies may be in-situ or ex-situ of NIF laser.
- ~ Communicate progress by means of publications, presentations, and internal reports.
- ~ May lead a multidisciplinary team of research at various levels.

MARGINAL DUTIES:

Scientific / Engineering

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ PhD or equivalent level of demonstrated knowledge in Physics, Material Science or related field.
- ~ Understanding of optics and laser physics.
- ~ Experience with high-power lasers and optics damage.
- ~ Experience in laser operation, electronics and mathematical modeling.
- ~ Demonstrated scientific accomplishment in materials and/or laser science.
- ~ Basic understanding of spectroscopy, chemical reactions, and material transport.
- ~ Experience in complying with short deadlines and milestone-oriented applied research.
- ~ Excellent verbal and written communication skills.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Experience leading a small research team.

SECURITY: Anticipated clearance level: L

EMPLOYMENT REP: Alison Bradley-Carver

EXPERIMENTAL PHYSICIST(270.0) - #NF-3120 - National Ignition Facility Programs Directorate/ICF Program - 9872

Date: 11/2/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The National Ignition Facility (NIF) is under construction by the Department of Energy (DOE) at the Lawrence Livermore National Laboratory (LLNL). A major goal of the NIF is to achieve laboratory scale thermonuclear ignition. Implosion of targets designed to reach this goal are planned to commence in FY08. These targets, which contain frozen deuterium-tritium (D-T) fuel layers at temperatures around 20 Kelvin, will require special cryogenic support systems, as well as unique systems to fill the ignition capsules with the D-T fuel. Additionally, an earlier version of a cryogenic target support system will be needed in FY06. This earlier system will not require targets with filled capsules. These systems must be specified, designed, prototyped, engineered, procured, tested, and incorporated into NIF operations. We are seeking a scientist with a good background in cryogenic systems to join the NIF Cryogenic Target Systems (NCTS) team. Will report to the Associate Program Leader (APL) for Target Science and Technology.

ESSENTIAL DUTIES:

- ~ In close collaboration with all participants in the NCTS Program, refine System and subsystem requirements, specifications, and interfaces.
- ~ Develop and maintain subsystem schedules and cost estimates.
- ~ Develop concepts for equipment and procedures to field cryogenic targets for the NIF. Provide appropriate thermal and mechanical analysis. Work with engineers, scientists, designers, and technicians to build and test prototypes, and lead and coordinate preliminary and final design of subsystems.
- ~ Write required progress reports, technical memoranda, and other documentation for work.
- ~ Prepare and participate in progress and design reviews.
- ~ Develop subsystem operations instruction manuals and protocols.
- ~ Participate in NIF cryogenic experiments.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ PhD in Experimental Physics or other relevant technical discipline, or equivalent level of demonstrated knowledge.
- ~ Hands-on experience with specifying, analyzing, building, testing, and using complex cryogenic equipment.
- ~ Experience with and knowledge of Project Management tools, and cost estimating and schedule development.
- ~ Excellent writing and oral communication skills, with demonstrated experience writing and presenting scientific and technical reports.
- ~ Ability to define and creatively solve complex technical problems.
- ~ Ability to work productively in a goal-oriented team setting under a close schedule, as well as independently.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Knowledge and experience with optical systems.
- ~ Familiarity with Inertial Confinement Fusion.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Alison Bradley-Carver

PRINCIPAL DEPUTY ASSOCIATE DIRECTOR(270.0) - #PT-3013 - Physics and Advanced Technologies Directorate - 9857

Date: 11/12/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Only Indefinite Career status Laboratory employees may apply for this position.

NATURE AND SCOPE OF POSITION:

The Physics and Advanced Technologies (PAT) Directorate has an opening for a Principal Deputy Associate Director (PDAD). Reporting directly to the Associate Director for Physics and Advanced Technologies (PAT), the PDAD will act as the Chief Operating Officer and Chief of Staff for the PAT Directorate. The PDAD will be responsible for the well-being and growth of the PAT scientific infrastructure (supporting functions that facilitate high quality science) and the management of PAT personnel. The selected candidate will serve as a senior advisor to the AD on major operational issues of programmatic and/or institutional interest and concern across all of the PAT Directorate divisional and programmatic activities. The successful candidate will be responsible for establishing and overseeing policies, procedures, and implementation plans to comply with external and Laboratory requirements as they relate to the PAT Directorate.

ESSENTIAL DUTIES:

- ~ Represent PAT on DOE, UC, and institutional policy-making bodies and task forces pertaining to the PAT directorate.
- ~ Participate in identifying and selecting staff, and assigning and evaluating scientific and operational work.
- ~ Ensure that PAT resources are effectively applied to support current and future scientific and operational programmatic needs.
- ~ Design and implement the appropriate scientific infrastructure for the Directorate.
- ~ Oversee the financial, operational, and personnel-related activities of the Directorate.
- ~ Work with the DAD for Operations and the DAD for Planning and Resources to assure that individuals within the directorate observe applicable requirements pertaining to LLNL ES&H, security, and business practices.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ PhD in physics or related technical field or equivalent level of demonstrated knowledge.
- ~ Experience managing and directing a multidisciplinary team of scientific personnel.
- ~ Demonstrated working knowledge of Laboratory programs, policies and procedures.
- ~ Experience and demonstrated technical leadership and management skills in a research and development environment.
- ~ Demonstrated analytical capabilities, specifically in strategic and technical analysis.
- ~ Demonstrated ability to effectively communicate over a wide range of topic areas and at middle and senior management levels with both internal and external organizations.
- ~ Technical understanding and knowledge of programs related to national security, fusion energy, plasma, nuclear, medical physics and other related technical fields
- ~ Knowledge of all relevant LLNL policies, procedures and requirements.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

None

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Carol Twiss

THEORETICAL PHYSICIST(270.0) - #PT-3025 - Physics and Advanced Technologies Directorate/N Division - 9854

Date: 10/24/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Physics and Advanced Technologies Directorate has an opening for a nuclear theorist in the Nuclear Theory and Modeling Group within N Division. The successful candidate is expected to assume a position of scientific and technical leadership and to establish an internationally recognized research program in relativistic heavy-ion phenomenology. The research is to be directed toward questions and techniques in the physics of relativistic heavy-ion collisions and applications of those techniques to Laboratory programs. Experience in the following areas is desired: (1) heavy-ion collision phenomenology, (2) relativistic transport theory (3) thermo- and hydrodynamics; (4) many-body methods. The candidate will work closely with other scientists from LLNL programs and external collaborators and is expected to compete for research funding within the Laboratory and federal agencies. This position reports to the group leader for Nuclear Theory and Modeling.

ESSENTIAL DUTIES:

- ~ Conduct theoretical nuclear physics research leading to publication in peer-reviewed journals and internal reports.
- ~ Provide scientific and technical leadership for research in nuclear structure and nuclear-reaction theory.
- ~ Proposal preparation and reporting, both for federal agencies and within the Laboratory.
- ~ Document and present results within LLNL, at external conferences, and in peer-reviewed journals.
- ~ Recruit and mentor postdoctoral researchers.
- ~ Establish a safe and secure work environment.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ PhD in physics or a closely related field or equivalent demonstrated knowledge.
- ~ Demonstrated expertise in relativistic heavy-ion collision phenomenology.
- ~ Demonstrated expertise in supercomputing and ability to utilize ASCI resources.
- ~ Demonstrated ability to work independently as well as in a team environment.
- ~ Effective verbal and written communication skills.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

None

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Carol Twiss

COMPUTER SCIENTIST(285.0) - #CO-2297 - Computer Applications Organization/Laser and Computation Programs Division - 9821

Date: 11/2/01 **Salary:** Open

NOTE:

Reposted position. Originally posted on 6/7/01. Previous candidates need not reapply. This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

Will support Total Waste Management System (TWMS) in the Hazardous Waste Management Division (HWMD) of Environmental Protection Department (EPD). Will participate in the design, implementation and administration of TWMS, a computerized total waste management system designed to enhance Laboratory compliance with federal, state, and local regulations relating to the storage, handling, and reporting of hazardous materials. Will interact with computer scientists, HWM customers and all levels of management.

ESSENTIAL DUTIES:

- ~ Gather user requirements for TWMS.
- ~ Develop software for TWMS to efficiently store, check, and retrieve hazardous waste information from a complex, high volume, critical database system.
- ~ Develop and implement suitable user interfaces on the web.
- ~ Assess, recommend, and incorporate TWMS design changes.
- ~ Monitor database quality assurance, data access and retrieval, and security.
- ~ Recommend and/or design and develop new tools for use with TWMS to meet new demands and provide quality improvements.
- ~ Recommend and/or program web tools to access the TWMS database.
- ~ Prepare Software Quality Assurance (SQA) documents following EPD SQA guidelines.
- ~ Provide customer support and training.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS in computer science, engineering, a physical science, or a related field, or equivalent level of demonstrated knowledge.
- ~ Demonstrated experience in relational database programming applications such as Ingres, Oracle.
- ~ Demonstrated experience in SQL, MS Excel, MS Word, and various

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microcomputer software applications, as well as in the use of UNIX, Windows and Macintosh operating systems.

- ~ Demonstrated experience in web programming and application development.
- ~ Demonstrated experiences working on a team, as well as independently, in a multi-disciplinary environment.
- ~ Demonstrated ability to work under pressure with short deadlines.
- ~ Demonstrated ability to work effectively with and respond to customers.
- ~ Demonstrated communications skills, both oral and written, necessary for a technical support position.
- ~ Demonstrated experience in C, C++ or Java programming language.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Familiarity with data types and technical terminology common to databases.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Barbara Tuck

COMPUTER SCIENTIST/MATH PROGRAMMER(285.0) - #CO-2407 - CAO/SCAD - 9822

Date: 11/8/01 **Salary:** Open

NOTE:

Reposted position. Originally posted on 6/22/01. Previous candidates need not reapply. This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

As a member of a team, will work on the development of large scientific application codes and use those codes to conduct collaborative scientific investigations. Current projects include the modeling of neutron and radiation transport, the design and implementation of high performance numerical methods for simulation codes, the research and development of data mining and pattern recognition algorithms for large-scale scientific data, the development of a parallel object-oriented framework to support structured adaptive mesh refinement (AMR) applications and applications of this technology in ALE-AMR and adaptive laser propagation simulations, and research in software component technology. Will interact with Laboratory and academic collaborators.

ESSENTIAL DUTIES:

- ~ Develop and implement large scientific application codes on massively parallel and distributed computers.
- ~ Develop and implement numerical algorithms on massively parallel and distributed computers.
- ~ Study and improve the parallel performance of codes.
- ~ Develop and/or interface to visualization tools to display results.
- ~ Develop and maintain automatic build systems.
- ~ Develop and maintain test frameworks, and perform testing.
- ~ Develop and maintain user documentation.

MARGINAL DUTIES:

- ~ Opportunity to attend conferences and co-author research papers.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS in computer science, mathematics, a physical science with a computer science emphasis or related field or equivalent level of demonstrated knowledge.
- ~ Experience with software engineering methodologies.
- ~ Proficiency in UNIX, C, and C++.
- ~ Proficiency in object-oriented methodologies.
- ~ Proficiency in scripting languages, such as BASH, PERL, and Python.

- ~ Experience designing and developing object-oriented software.
- ~ Knowledge of numerical analysis or computational mathematics.
- ~ Technical reading ability and comprehension.
- ~ Communication skills necessary to work effectively in a team environment.
- ~ Writing skills necessary to prepare technical documentation.
- ~ Work independently and interact with others in a team environment.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS/PhD in computer science, mathematics, a physical science with a computer science emphasis.
- ~ Experience in programming for parallel architectures.
- ~ Visualization experience.
- ~ Undergraduate course work in physics.
- ~ Proficiency in FORTRAN.
- ~ Familiarity with automatic Makefile generation tools, such as autoconf and automake.
- ~ Experience profiling codes and improving performance.
- ~ Experience working on multiple tasks and meeting deadlines.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Barbara Tuck

GROUP LEADER(285.0) - #CO-3077 - Scientific Computing and Communications Department/ Livermore Computing - 9820

Date: 10/19/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Only Indefinite Career status employees may apply for this position. Candidates will be competing with a qualified employee acting in this position.

NATURE AND SCOPE OF POSITION:

The High Performance Systems Division (HPSD) of Livermore Computing (LC) has an opening for a Group Leader to lead the ASCI Systems Group (ASG). As the ASG Group Leader you will provide administrative and technical oversight in the integration and system administration of IBM and SGI supercomputers and visualization systems, as well as other key infrastructure systems within LC. Besides providing technical oversight, the ASG Group Leader is expected to perform advanced computer system administration work on the many diverse systems within LC. Will be consulted by HPSD and LC staff members on a number of system configuration and security issues. The ASG Group Leader will be expected to participate on a rotating 24-hour call list for systems supported by the group.

The Group Leader will work closely with the HPSD division leader, other HPSD/LC group leaders, and Scientific Computing and Communications Department (SCCD) management to integrate and bring into a production state the various computer systems assigned to the group. This position also serves on a number of LC committees dealing with planning and computer security activities.

ESSENTIAL DUTIES:

- ~ Manage a diverse technical team including recruiting, hiring, career development, performance review, ranking, and salary administration.
- ~ Provide leadership and technical direction for group members.
- ~ Serve as a member of the HPSD management team.
- ~ Develop and track integration plans and schedules.
- ~ Survey and understand advanced computer and network administration techniques and technologies in order to be able to make effective recommendations and decisions.
- ~ Establish contacts and interact as needed with users and other system

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administration and computer security organizations within the Laboratory.

- ~ Actively participate in Laboratory-wide policy setting roles to help ensure the requirements of high performance computing are taken into account.
- ~ Ensure compliance with applicable ES&H, ISM, and cyber security requirements.

MARGINAL DUTIES:

- ~ Occasional travel for meetings, training, and conferences.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS in computer science or a related field or equivalent level of demonstrated knowledge.
- ~ Experience with scaleable or massively parallel systems.
- ~ Advanced knowledge in UNIX system and network administration.
- ~ Advanced knowledge in computer and network security.
- ~ Experience developing software tools and utilities in a UNIX environment using standard programming and scripting languages.
- ~ Written and verbal communication skills necessary to effectively interact with management, staff, end users, and others.
- ~ Experience working in a rapidly changing environment with competing priorities.
- ~ Experience in a technical leadership role.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS in computer science or a related field.
- ~ Management or supervisory experience, including performance and career management.
- ~ Project leadership experience.
- ~ Ability and willingness to develop proposals and write technical papers.
- ~ Skilled in mentoring others to help them realize their full potential.
- ~ Tactful in dealing with diverse people and situations.
- ~ Thinks in future-oriented terms; anticipates and considers needs of end users.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Barbara Tuck

COMPUTER SCIENTIST/CLIENT LIAISON(285.0) - #CO-3129 - Systems and Network Department - 9819

Date: 11/1/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position. This position is also posted as CO-3130.

NATURE AND SCOPE OF POSITION:

Will be the Systems and Network Department (SND) Client Liaison (CL) responsible for providing a broad range of computer system and network administration to the Energy and Environment Directorate. Will be the primary point of contact for identifying, communicating, and coordinating support activities. Will provide administrative management and functional direction to the SND staff. Will report to the Computer Support Unit (CSU) Division Leader and will be a member of the department management team.

ESSENTIAL DUTIES:

- ~ Provide guidance and direction for a broad range of technical solutions to install or upgrade, secure, tune, monitor and maintain computer systems and networks.
- ~ Identify program needs and coordinate SND solutions and support.
- ~ Develop and manage service-level agreements.
- ~ Provide career guidance/development, write performance appraisals, participate in value ranking and salary administration.
- ~ Provide leadership to the team; build, develop and nurture team dynamics;

promote the use of interdepartmental resources, tools, metrics and solutions.

- ~ Plan, manage, and supervise the team's workload.
- ~ Oversee the staff in determining the needs and requirements for new technical solutions to be developed and deployed in Institutional Services groups.
- ~ Forecast, recruit and hire staff to meet programmatic, directorate and department needs.
- ~ Participate in departmental and/or directorate/program strategic planning.
- ~ Ensure compliance with applicable ES&H and computer security requirements.

MARGINAL DUTIES:

None

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS in computer science or equivalent level of demonstrated knowledge.
- ~ Experience providing broad technical contributions and expertise in building, maintaining and supporting integrated computing environments.
- ~ Experience managing computer security related issues.
- ~ Demonstrated supervisory skills necessary to provide oversight and management of a technical staff.
- ~ Demonstrated written communication skills necessary to develop formal correspondence, reports, proposals and appraisals.
- ~ Demonstrated verbal communication skills necessary to effectively explain, present, direct, negotiate, influence, train, coach and counsel employees.
- ~ Demonstrated leadership skills necessary to advise, counsel, recommend and approve actions on a wide variety of topics and issues.
- ~ Demonstrated customer service skills that show responsiveness to customer needs, requests and issues.
- ~ Demonstrated ability to maintain effective working relationships.
- ~ Demonstrated analytical and problem-solving skills necessary to independently analyze data, investigate solutions and make recommendations.
- ~ Demonstrated working knowledge of emerging technologies and their application in solving business problems.
- ~ Experience developing service agreements.
- ~ Experience providing broad, independent interactions with all levels of personnel.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Understanding of directorate/program line of business (LOB).
- ~ Understanding of LLNL and DOE computer security requirements.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Barbara Tuck

COMPUTER SCIENTIST/MATH PROGRAMMER(285.0) - #CO- 3179 - CAR/Computer Applications' Science and Engineering Division - 9817

Date: 11/12/01 **Salary:** Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

Will work as part of the Modeling Of Network Topologies And eNtity Associations (MONTANA) Projects team that develops relationship modeling and analysis technologies, and provides consulting services, policy reviews, and assessments for the Information Operations and Assurance Center (IOAC) to meet the needs of DOE, DoD, and other federal agencies. Will perform software development in technologies that include, RDBMS, cross-platform (Windows, Solaris, & Linux) Java and C++, and Web/JSP applications. The project domain is the modeling,

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manipulation, and analysis of objects and their relationships. The domain area of these objects and their relationships vary, but the current focus is on computer networks. Will interact with team members, Lab management, and customers from federal agencies. Reports to the group leader for Information Operations.

ESSENTIAL DUTIES:

- ~ Design, defend, develop, and review software and system architectures.
- ~ Write, present, defend, and participate in reviews for proposals for new work before Lab management and potential customers.
- ~ Work with customers to ensure that software and systems interface properly.
- ~ Develop and deliver technical presentations.
- ~ Apply sound software engineering technologies and QA techniques to all aspects of work.
- ~ Make recommendations about and demonstrate use of appropriate technologies to meet the customer requirements.
- ~ Write software to implement functionality in the project domains, primarily computer network mapping at this time, using technologies specified in the Nature and Scope of Job section.

MARGINAL DUTIES:

Specify, procure, and assemble hardware components into integrated systems for the customer.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS in Computer Science or related technical discipline, or level of demonstrated knowledge.
- ~ Solid experience in one or more of the following:
 - ~ Database design, applications (Oracle, Sybase), and technologies (SQL, JDBC, ODBC).
 - ~ Modern programming languages (Java, JSP, C/C++, Perl, HTML).
 - ~ Modern software development methodologies for multi-platform targeting (MS Windows NT/2000, UNIX).
 - ~ Network protocols, issues, technologies (routing, firewalls, intrusion detection), and vulnerabilities.
 - ~ Computer security issues, vulnerabilities, and information technologies.
 - ~ Experience determining the software component relationships of moderately sized Java, JSP, and/or C++ applications and make enhancements with minimal guidance.
 - ~ Experience developing original data structure software and efficient algorithms for Java, JSP, and/or C++ applications.
 - ~ Experience implementing original configuration management and control systems using commercial products.
 - ~ Experience writing clear, concise user documentation for software products and proposal materials to acquire funding for new projects.
 - ~ Ability and willingness to administer one's own Windows and UNIX workstations, and to help others do the same.
 - ~ Understanding of a basic QA process that includes requirements; design; configuration management control; testing and its place in the software development process.
 - ~ Demonstrated ability to learn new technologies and apply them as an individual contributor.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS in Computer Science or related technical discipline, or equivalent combination of education and experience.
- ~ Expertise in database design, applications, and technologies, especially data warehousing.
- ~ Expertise in modeling networks of relationships among large numbers of objects.
- ~ Knowledge of graph theory.
- ~ Expertise in network protocols, issues, technologies, and vulnerabilities.
- ~ Expertise in computer security issues and information technologies.
- ~ Experience effectively using a basic QA process that includes, but is not limited to, requirements, design, configuration management and control, and testing with

associated tools that support this process.

- ~ Ability to build computer systems and networks from COTS products.

SECURITY: Anticipated clearance level: Q and SCI

EMPLOYMENT REP: Barbara Tuck

SCIENTIFIC PROGRAMMER(285.0) - #CO-3194 - CAR/Laser and Computations Programs Division - 9821

Date: 11/12/01

Salary: Open

NOTE:

This is an Indefinite Career position. Lab employees and external candidates may be considered for this position. Part-time candidates will be considered.

NATURE AND SCOPE OF POSITION:

The Computations Directorate has an opening for a bioinformatics programmer/researcher with a background in genomics. They will work with a team who provides state-of-the-art databases and tools for a functional genomics project related to pathogenicity. This effort will provide the appropriate tools to support current and future initiatives in comparative and functional genomics that will lead to an advanced understanding of the mechanisms of virulence. We are seeking an individual to work with a multidisciplinary research team. Will report to the bioinformatics group leader.

ESSENTIAL DUTIES:

- ~ Work with senior LLNL scientists to determine the informatics requirements of new or ongoing projects in functional genomics related to virulence.
- ~ Perform independent research to determine, locate, or invent appropriate algorithms and data structures to support a core microarray analysis facility.
- ~ Work with assistance from local infrastructure experts to design, procure, and build all components and integrate them with other existing computational infrastructure.

MARGINAL DUTIES:

- ~ Publish peer-reviewed journal articles about the research.
- ~ Occasional travel.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ MS or equivalent level of demonstrated knowledge in a computer science discipline.
- ~ Demonstrated knowledge of software design, systems analysis, and large-scale scientific programming.
- ~ Demonstrated self-motivation and ability to develop and troubleshoot complex software.
- ~ Experience presenting ideas and writing reports.
- ~ Experience in genomics research and/or bioinformatics programming.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ PhD in a computer science discipline.
- ~ Exposure to Web programming (dynamic CGI/HTML scripts written in Perl), SQL database design and programming, and statistics.
- ~ BS/MS/PhD or equivalent in a biological science discipline.
- ~ Demonstrated ability to learn new technical skills quickly.
- ~ Experience with writing software in a Unix environment.

SECURITY: Anticipated clearance level: None

EMPLOYMENT REP: Barbara Tuck

**COMPUTER SCIENTIST(285.0) - #CO-3203 - CAR/Laser and
Computation Programs Division - 9821**

Date: 11/14/01 **Salary:** Open

NOTE:

This is a Flexible Term (at will) appointment, not to exceed six years. If final candidate is an Indefinite Career employee, Indefinite Career status will be maintained should funding allow. Lab employees and external candidates may be considered for this position.

NATURE AND SCOPE OF POSITION:

The Environmental Restoration Division (ERD) in the Environmental Protection Department (EPD) has an immediate opening for a computer scientist to provide 4D database programming in support of the Phoenix project management and budget application. Candidate will work closely with the application to provide enhancement and implement new requirements; be responsible for documenting the existing and any new 4D database tables and applications; and provide technical support for the current application. This position reports to the Resource Manager of ERD.

ESSENTIAL DUTIES:

- ~ Design software and collaborate in the implementation of enhancements and new requirements of the Phoenix project management and budget application.
- ~ Provide support to scientists and other users in the effective utilization of the Phoenix project management and budget application.
- ~ Thoroughly document existing and new additions to Phoenix 4D application algorithms, design and program code.
- ~ Provide technical support for the 4D Phoenix software application, including changes to the code and associated documentation.
- ~ Develop user interface guidelines and requirements specifications.
- ~ Assist in the development and migration of Phoenix into a web based application.

MARGINAL DUTIES:

- ~ Provide backup support to other 4th Dimension applications in ERD and possibly in other divisions in EPD (moved from Essential Duties).
- ~ Provide support to other database projects in ERD.

ESSENTIAL SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ BS in computer science, mathematics, a physical science with a computer science emphasis or related field, or equivalent demonstrated knowledge.
- ~ Demonstrated advanced programming skills in 4th Dimension.
- ~ Demonstrated ability to understand project and budget management to implement the new requirements to the existing system.
- ~ Experience with procedural programming languages.
- ~ Experience with relational database technology.
- ~ Experience with the Unix operating system, Macintosh, and PC operating systems.
- ~ Demonstrated knowledge of web based application development tools.
- ~ Must possess writing skills necessary to prepare technical documentation.
- ~ Experience working independently, as well as interacting effectively with others in a team environment.

DESIRED SKILLS, KNOWLEDGES, AND ABILITIES:

- ~ Knowledge of PERL, Java, XML programming language.
- ~ Experience or interest in Oracle RDBMS.
- ~ Familiar with Oracle Technology.

SECURITY: Anticipated clearance level: Q

EMPLOYMENT REP: Barbara Tuck

COMPLIANCE STATEMENT

The University of California, in compliance with Title VI and VII of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, (45CR 86), Sections 503 and 504 of the Rehabilitation Act of 1973, the California Fair Employment and Housing Act, and the Americans with Disabilities Act of 1990, does not discriminate on the basis of race, color, religion, marital status, national origin, ancestry, sex, sexual orientation, physical or mental disability in any of its policies, procedures, or practices; nor does the University, in compliance with the Age Discrimination in Employment Act of 1967 and Section 402 of the Vietnam Era Veterans Readjustment Act of 1974, discriminate against any employees or applicants for employment on the basis of their age or veteran status (special disabled veteran, vietnam era veteran, and any other veteran who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized. This nondiscrimination policy covers admission, access, and treatment in University programs and activities, and application for and treatment in University employment.

In conformance with University policy and pursuant to Executive Order 11246 as amended, Section 503 of the Rehabilitation Act of 1973 and Section 402 of the Vietnam Era Veterans Readjustment Act of 1974, the University of California is an affirmative action/equal opportunity employer.

The Laboratory's Affirmative Action & Diversity Program Director is Tommy E. Smith Jr.

Inquiries regarding the University's and the Laboratory's equal opportunity and affirmative action policies may be directed to the Employment Manager, (925) 422-0821.